

=> fil reg

FILE 'REGISTRY' ENTERED AT 08:32:29 ON 26 JUL 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0

DICTIONARY FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

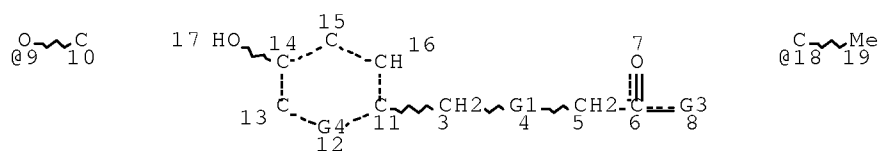
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=> d que stat l18

L12 STR



REP G1=(0-1) S

VAR G3=9/N

VAR G4=CH/18

NODE ATTRIBUTES:

NSPEC IS RC AT 10

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L13 SCR 2026 OR 2016 OR 1918 OR 1929 OR 2040

L16 4329 SEA FILE=REGISTRY SSS FUL L12 NOT L13

L18 3907 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L16 NOT PMS/CI

=> d his nofile

(FILE 'HOME' ENTERED AT 07:51:43 ON 26 JUL 2009)

FILE 'HCAPLUS' ENTERED AT 07:51:59 ON 26 JUL 2009

July 26, 2009

10/586,707

2

L1           1 SEA SPE=ON   ABB=ON   PLU=ON   WO2005-EP50140/AP  
              D SCA  
              SEL RN

FILE 'REGISTRY' ENTERED AT 07:52:36 ON 26 JUL 2009

L2           4 SEA SPE=ON   ABB=ON   PLU=ON   (1592-23-0/BI OR 23128-74-7/B  
              I OR 6683-19-8/BI OR 70198-29-7/BI)

FILE 'LREGISTRY' ENTERED AT 07:52:46 ON 26 JUL 2009

L3           STR

FILE 'REGISTRY' ENTERED AT 07:55:17 ON 26 JUL 2009

L4           STR L3

FILE 'REGISTRY' ENTERED AT 07:56:19 ON 26 JUL 2009

L5           1 SEA SSS SAM L4  
              D SCA

FILE 'LREGISTRY' ENTERED AT 07:56:47 ON 26 JUL 2009

L6           STR L4

FILE 'REGISTRY' ENTERED AT 07:58:10 ON 26 JUL 2009

L7           1 SEA SSS SAM L6  
              D SCA

FILE 'LREGISTRY' ENTERED AT 07:59:59 ON 26 JUL 2009

L8           STR L6

FILE 'REGISTRY' ENTERED AT 08:02:52 ON 26 JUL 2009

L9           0 SEA SSS SAM L8

FILE 'LREGISTRY' ENTERED AT 08:03:07 ON 26 JUL 2009

L10          STR L6

FILE 'REGISTRY' ENTERED AT 08:07:30 ON 26 JUL 2009

L11          2 SEA SSS SAM L10  
              D SCA

FILE 'LREGISTRY' ENTERED AT 08:10:06 ON 26 JUL 2009

L12          STR L10

L13          SCR 2026 OR 2016 OR 1918 OR 1929 OR 2040

FILE 'REGISTRY' ENTERED AT 08:11:42 ON 26 JUL 2009

L14          13 SEA SSS SAM L12 NOT L13  
              D L10

L15          3 SEA SSS SAM L10 NOT L13

L16          4329 SEA SSS FUL L12 NOT L13  
              SAV L16 FAN707/A

L17          2 SEA SPE=ON   ABB=ON   PLU=ON   L2 AND L16

L18          3907 SEA SPE=ON   ABB=ON   PLU=ON   L16 NOT PMS/CI  
              D RN L17 1-2

FILE 'HCAPLUS' ENTERED AT 08:16:45 ON 26 JUL 2009

L19          QUE SPE=ON   ABB=ON   PLU=ON   ADDITIVE? OR ADJUVANT? OR  
              AUXILIAR? OR MODIFIER?

L20          481 SEA SPE=ON   ABB=ON   PLU=ON   L18(L)L19

L21          7057 SEA SPE=ON   ABB=ON   PLU=ON   L17

L22          285 SEA SPE=ON   ABB=ON   PLU=ON   L20 AND L21

L23          QUE SPE=ON   ABB=ON   PLU=ON   (REDUC? OR DIMINISH? OR  
              DECREAS? OR LOW OR LOWER?) (2A)DUST

L24	3	SEA	SPE=ON	ABB=ON	PLU=ON	L20 AND L23
L25		QUE	SPE=ON	ABB=ON	PLU=ON	MIX### OR MIXTURE OR BLEND OR FORMULAT?
L26	3380	SEA	SPE=ON	ABB=ON	PLU=ON	L21 AND L25
L27		QUE	SPE=ON	ABB=ON	PLU=ON	POLYMER OR COPOLYMER OR HOMOPOLYMER OR TERPOLYMER OR RESIN
L28	2787	SEA	SPE=ON	ABB=ON	PLU=ON	L26 AND L27
L29	2	SEA	SPE=ON	ABB=ON	PLU=ON	L24 NOT L1 D AN 1-2
L30		QUE	SPE=ON	ABB=ON	PLU=ON	GRAIN# OR GRANUL? OR POWDER? OR SOOT? OR SMUT? OR FINES# OR DUST
L31	378	SEA	SPE=ON	ABB=ON	PLU=ON	L28 AND L30
L32		QUE	SPE=ON	ABB=ON	PLU=ON	L27(3A)L30
L33	90	SEA	SPE=ON	ABB=ON	PLU=ON	L31 AND L32 D KWIC 1-2
L34		QUE	SPE=ON	ABB=ON	PLU=ON	L27(3A)L19
L35	18	SEA	SPE=ON	ABB=ON	PLU=ON	L33 AND L34
L36	204	SEA	SPE=ON	ABB=ON	PLU=ON	L20 AND L34
L37	17	SEA	SPE=ON	ABB=ON	PLU=ON	L36 AND L32
L38	24	SEA	SPE=ON	ABB=ON	PLU=ON	L35 OR L37
L39	23	SEA	SPE=ON	ABB=ON	PLU=ON	L38 NOT L24

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 08:32:38 ON 26 JUL 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 26 Jul 2009 VOL 151 ISS 5

FILE LAST UPDATED: 24 Jul 2009 (20090724/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases will soon be updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> d ibib abs hitstr hitind l24 1-3

L24 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:696969 HCAPLUS Full-text

DOCUMENT NUMBER: 143:154325

TITLE: Method for continuous production of uniform  
low-dust granules from polymer  
additives

INVENTOR(S): Breitenstein, Benjamin; Gfroerer, Thomas Georg;  
Waldner, Rolf; Lutz, Pierre

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
WO 2005071008	A1	20050804	WO 2005-EP50140	20050114
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2553012	A1	20050804	CA 2005-2553012	20050114
EP 1706451	A1	20061004	EP 2005-707771	20050114
EP 1706451	B1	20070509		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1910227	A	20070207	CN 2005-80003063	20050114
AT 361943	T	20070615	AT 2005-707771	20050114
BR 2005007081	A	20070619	BR 2005-7081	20050114
JP 2007524740	T	20070830	JP 2006-550159	20050114
ES 2285680	T3	20071116	ES 2005-707771	200501

ZA 2006005545	A	20071128	ZA 2006-5545	14
				20060705
KR 2006127890	A	20061213	KR 2006-714623	20060720
MX 2006008280	A	20060929	MX 2006-8280	20060721
IN 2006CN02730	A	20070608	IN 2006-CN2730	20060724
NO 2006003740	A	20061020	NO 2006-3740	20060821
PRIORITY APPLN. INFO.:		EP 2004-100246	A	20040123
		WO 2005-EP50140	W	20050114

AB The granule-forming polymer additives are mixed together with commonly used polymer processing additives, the mixture is converted into a workable mass and pressed through an orifice. The pre-shaped strand-like extrudate is cooled and, while still in a workable state, formed into granules by rolling, impressing, cooling and sieving through sieve granulator. The granule forming polymer additives of this method are substituted phenolic derivs. of Irganox 1010 or Irganox 1098 additive type.

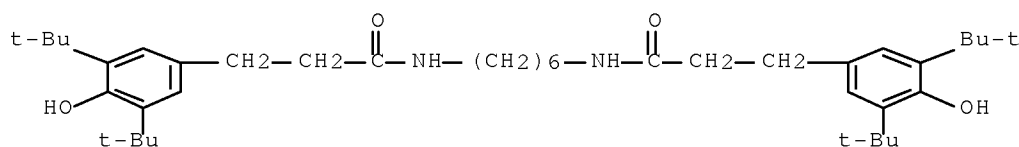
IT ~~23128-74-7~~, Irganox 1098

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(in mixture with Irganox 1010; ~~low-dust~~ uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)

RN 23128-74-7 HCAPLUS

CN Benzenepropanamide, N,N'-1,6-hexanediylbis[3,5-bis(1,1-dimethylethyl)-4-hydroxy- (CA INDEX NAME)



IT ~~6683-19-8~~, Irganox 1010

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(in mixture with Irganox 1098; ~~low-dust~~ uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)

6

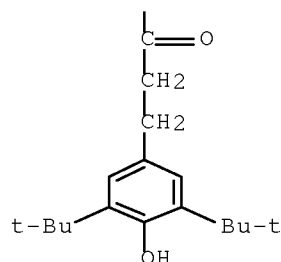
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

CC(C)(C)C1=CC=C(C(C)(C)C)C(O)=C1CCOC(=O)C(C)(C)COC(=O)CCc2cc(C(C)(C)C)c(O)c(C)c2

PAGE 1-B

— Bu-t

PAGE 2-A



- IC ICM C08K005-13  
ICS C08K003-00; C08K005-00; C08K007-16; C08K013-02; B01J002-00; B01J002-22; B01J002-24
- CC 37-6 (Plastics Manufacture and Processing)
- ST polymer additive ~~low dust~~ granulation phenolic granule forming aid
- IT Extrusion of plastics and rubbers  
Granulation  
(~~low-dust~~ uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT Phenols, uses  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(substituted, derivs.; ~~low-dust~~ uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT 23128-74-7, Irganox 1098  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(in mixture with Irganox 1010; ~~low-dust~~ uniform granulation of polymer ~~additives~~ using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT 6683-19-8, Irganox 1010  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(in mixture with Irganox 1098; ~~low-dust~~ uniform granulation of polymer ~~additives~~ using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT 1592-23-0, Calcium stearate 70198-29-7, Tinuvin 622  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(mix with Irganox 1010; ~~low-dust~~ uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN

## THE RE FORMAT

L24 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:102103 HCAPLUS Full-text

DOCUMENT NUMBER: 126:186869

ORIGINAL REFERENCE NO.: 126:36079a,36082a

TITLE: ~~Low-dust~~ granules of plastic  
additives containing calcium stearate and their  
manufactureINVENTOR(S): Thibaut, Daniel; Breitenstein, Benjamin;  
Kirchberger, Linda

PATENT ASSIGNEE(S): Ciba-Geigy Corporation, USA

SOURCE: U.S., 23 pp., Cont.-in-part of U.S. Ser. No.  
365,262, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

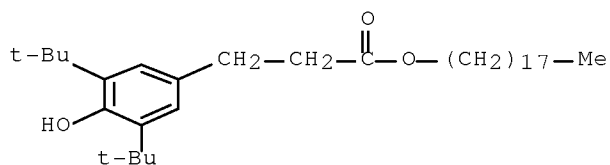
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 5597857	A	19970128	US 1995-420388	199504 12
EP 719824	A2	19960703	EP 1995-810801	199512 18
EP 719824	A3	19980225		
EP 719824	B1	20010627		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, PT, SE				
AT 202586	T	20010715	AT 1995-810801	199512 18
ES 2158063	T3	20010901	ES 1995-810801	199512 18
AU 9540613	A	19960704	AU 1995-40613	199512 21
AU 705017	B2	19990513		
CA 2166022	A1	19960629	CA 1995-2166022	199512 22
FI 9506206	A	19960629	FI 1995-6206	199512 22
JP 08333477	A	19961217	JP 1995-351662	199512 26
JP 4061560	B2	20080319		
IN 194371	A1	20041030	IN 1995-DE2407	199512 26
NO 9505307	A	19960701	NO 1995-5307	199512 27
NO 309724	B1	20010319		
ZA 9510968	A	19960708	ZA 1995-10968	



				199512 27
CN 1132763	A	19961009	CN 1995-120114	
				199512 27
CN 100360598	C	20080109		
BR 9506100	A	19971223	BR 1995-6100	
				199512 27
CZ 289892	B6	20020417	CZ 1995-3475	
				199512 27
SK 283951	B6	20040504	SK 1995-1653	
				199512 27
RU 2151782	C1	20000627	RU 1995-122533	
				199512 28
JP 2007314810	A	20071206	JP 2007-229181	
				200709 04
PRIORITY APPLN. INFO.:			US 1994-365262	B2 199412 28
			US 1995-420388	A 199504 12
			JP 1995-351662	A3 199512 26
AB	Low-dust granules of plastic additives containing $\geq 10\%$ Ca stearate (I), where the water content of the calcium stearate is less than 2%, have a particle size distribution (ISO 3435) 1-10 mm, loose bulk d. $> 400$ g/l, and a flowability (DIN 53492) $< 15$ s (tR25). These granules are manufactured by heating the additive mixture until $\geq 80\%$ of I is melted, extruding the melt through a nozzle with hole diameter 1-10 mm, and forming granules.			
IT	2082-79-3, Irganox 1076    6683-19-8, Irganox 1010 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (low-dust granules of plastic additives containing calcium stearate)			
RN	2082-79-3 HCAPLUS			
CN	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)			



July 26, 2009 10/586,707

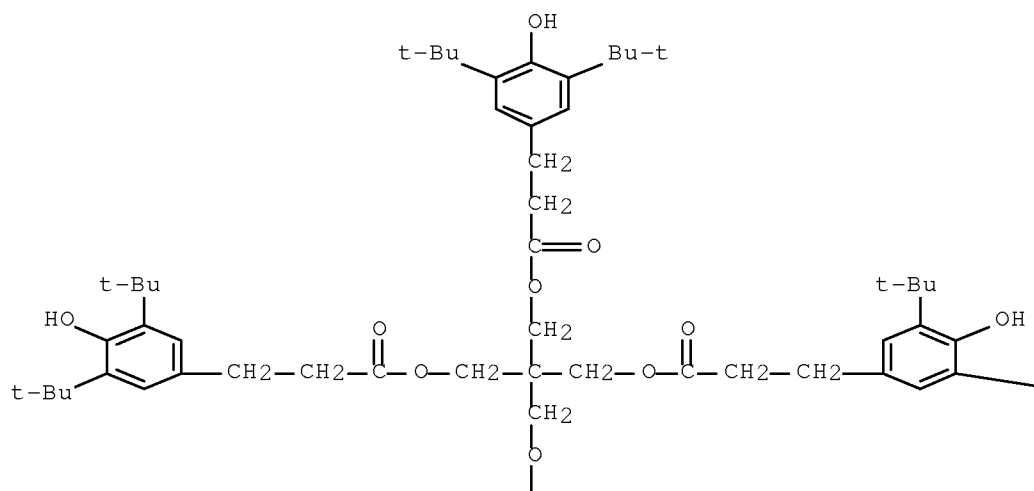
10/586,707

10

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
 oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

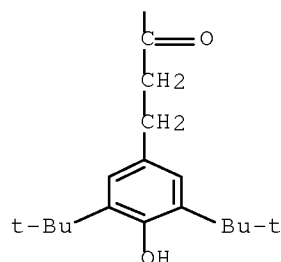
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



IC ICM C08K005-09  
ICS C09K015-32

INCL 524400000

CC 37-6 (Plastics Manufacture and Processing)

IT Granulation  
(extrusion-; low-dust granules of plastic additives containing calcium stearate)

IT Amines, uses  
Phenols, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(hindered; low-dust granules of plastic additives containing calcium stearate)

IT Antiblocking agents  
Antistatic agents  
Fireproofing agents  
Light stabilizers  
Lubricants  
Pigments, nonbiological  
UV stabilizers  
(low-dust granules of plastic additives containing calcium stearate)

IT Oxides (inorganic), uses  
Soaps  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(low-dust granules of plastic additives containing calcium stearate)

IT Esters, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(thio; low-dust granules of plastic additives containing calcium stearate)

IT 89421-57-8, Irganox B 315  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(Irganox B 315; low-dust granules of plastic additives containing calcium stearate)

IT 1592-23-0, Calcium stearate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(Radiastar 1060; low-dust granules of plastic additives containing calcium stearate)

IT 2082-79-3, Irganox 1076 6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or

chemical process); PROC (Process); USES (Uses)  
(low-dust granules of plastic  
additives containing calcium stearate)  
IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
RL: POF (Polymer in formulation); USES (Uses)  
(low-dust granules of plastic additives  
containing calcium stearate)  
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS  
RECORD (6 CITINGS)  
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L24 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1996:529489 HCAPLUS Full-text  
DOCUMENT NUMBER: 125:169653  
ORIGINAL REFERENCE NO.: 125:31783a,31786a  
TITLE: low-dust granules of plastic  
additives containing calcium stearate, their  
preparation and their use  
INVENTOR(S): Thibaut, Daniel; Breitenstein, Benjamin;  
Kirchberger, Linda  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
SOURCE: Eur. Pat. Appl., 36 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 719824	A2	19960703	EP 1995-810801	199512 18
EP 719824	A3	19980225		
EP 719824	B1	20010627		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, PT, SE				
US 5597857	A	19970128	US 1995-420388	199504 12
PRIORITY APPLN. INFO.:			US 1994-365262	A 199412 28
			US 1995-420388	A 199504 12

AB Low-dust granules of plastic additives, comprising  $\geq 10\%$  Ca stearate (I), where the water content of the I is  $< 2\%$ , having particle size distribution (ISO 3435) 1-10 mm, loose bulk d.  $> 400$  g/L, and flowability (DIN 53492)  $< 15$  s (tR25), are obtained for the stabilization of organic polymers. The granules may incorporate a sterically hindered phenol and a phosphite and are produced by warming a mixture of additives containing 10-100% I until  $\geq 80\%$  of the I is melted, pressing the melt through 1-10 mm-diam holes or nozzles, and forming granules from the extrudate in the plastic state. An example was given which incorporated granulated extruded I and Irganox B 215 in polypropylene; the

yellowness index of the stabilized polymer was less after repeated processing at 260° than a composition using powdered I.

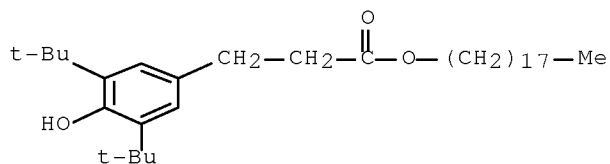
IT 2082-79-3, Irganox 1076 6683-19-8, Irganox 1010

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(low-dust granules of plastic additives containing calcium stearate)

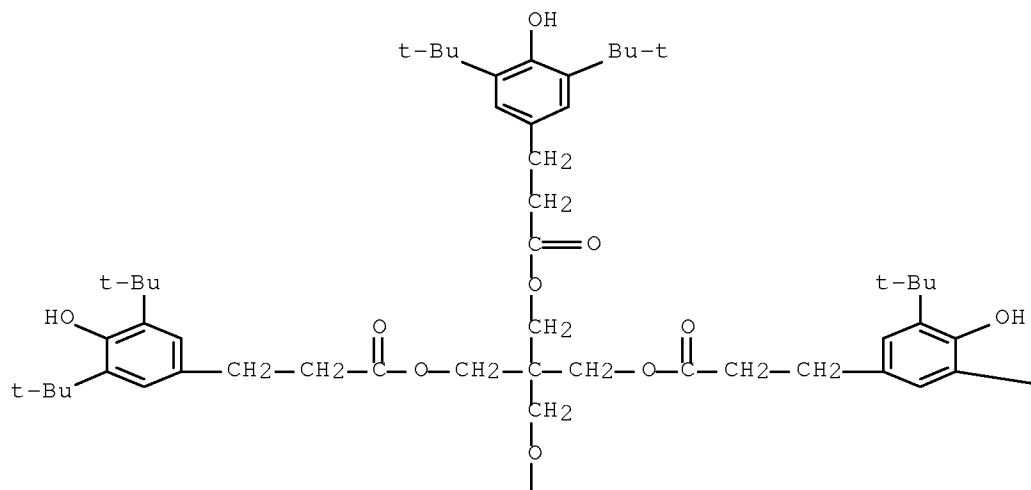
RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

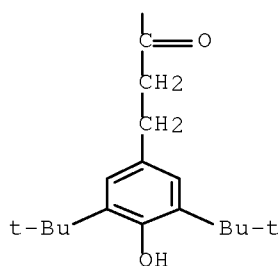


PAGE 1-A

PAGE 1-B

— Bu-t

PAGE 2-A



IC ICM C08K005-00  
ICS C08K003-00

ICI C08K005-00, C08K005-098, C08K005-13, C08K005-3435, C08K005-52;  
C08K003-00, C08K003-22, C08K003-26, C08K003-34

CC 37-6 (Plastics Manufacture and Processing)

IT Antioxidants  
(low-dust granules of plastic additives  
containing calcium stearate)

IT Light stabilizers  
(UV, low-dust granules of plastic additives  
containing calcium stearate)

IT 1592-23-0, Calcium stearate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(Radiastar 1060; low-dust granules of plastic  
additives containing calcium stearate)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
RL: POF (Polymer in formulation); USES (Uses)  
(low-dust granules of additives containing  
calcium stearate for polyolefins)

IT ~~2082-79-3~~, Irganox 1076 ~~6683-19-8~~, Irganox  
1010 31570-04-4, Irgafos 168 89421-57-8, Irganox B 215  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(low-dust granules of plastic  
additives containing calcium stearate)

July 26, 2009

10/586,707

15

OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS  
RECORD (11 CITINGS)

=> d ibib abs hitstr hitind 139 1-23

L39 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:375438 HCAPLUS Full-text  
DOCUMENT NUMBER: 150:424240  
TITLE: Manufacture method of universal white  
masterbatch  
INVENTOR(S): Shi, Hangwu; Zhu, Xihua; Zhao, Maohua; Hong,  
Yin; Chen, Jianguo  
PATENT ASSIGNEE(S): Ningbo Colour Master Batch Co., Ltd., Peop. Rep.  
China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
6pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
CN 101392078	A	20090325	CN 2008-10122122	200810 28
PRIORITY APPLN. INFO.:			CN 2008-10122122	200810 28

AB The title white masterbatch is manufactured from (by weight%) carrier resin (one or two of polyethylene-ethylene/butylene-styrene copolymer or ethylene-vinyl acetate copolymer) 15-20, pigment (one or two of rutile-type titanium dioxide or anatase-type titanium dioxide) 40-80, dispersant (one or two of polyethylene wax, oxidized polyethylene wax, or ethylene-vinyl acetate copolymer wax) 5-10, additive (one or two of stearate or ethylenebis(stearamide)) 0-5, thermal stabilizer (one of phenols or phosphites) 0-2, and filler (one or more of calcium carbonate, talcum powder, or wollastonite) 0-40. The manufacture method comprises preparing starting material at ratio, mixing under low speed for 0-10 min, mixing under high speed for 5-25 min, melting and mixing with an extruder while controlling the temperature at 190-220° and rotation speed of 80-400 r/min to uniformly disperse the pigment in carrier resin, granulating, drying, and packaging. The obtained white masterbatch has good dispersibility, good impact resistance, and high concentration, and can be used in different materials. The manufacture method is simple and economic, and has wide application.

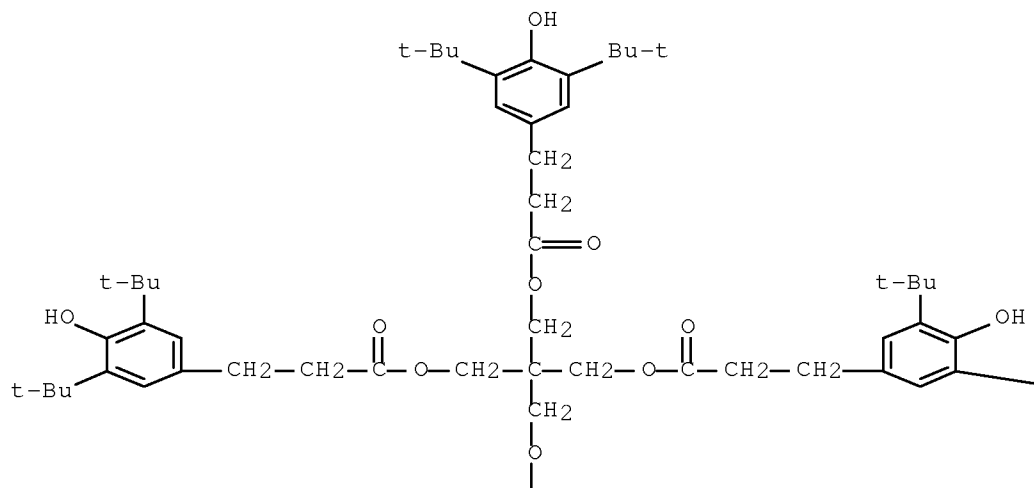
IT 6683-19-8

RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture method of universal white masterbatch)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

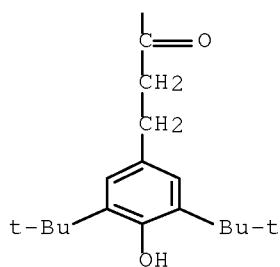
PAGE 1-A



PAGE 1-B

Chemical structure diagram for PAGE 1-B. The structure shows a 2,4,6-tri-tert-butylphenyl group.

PAGE 2-A





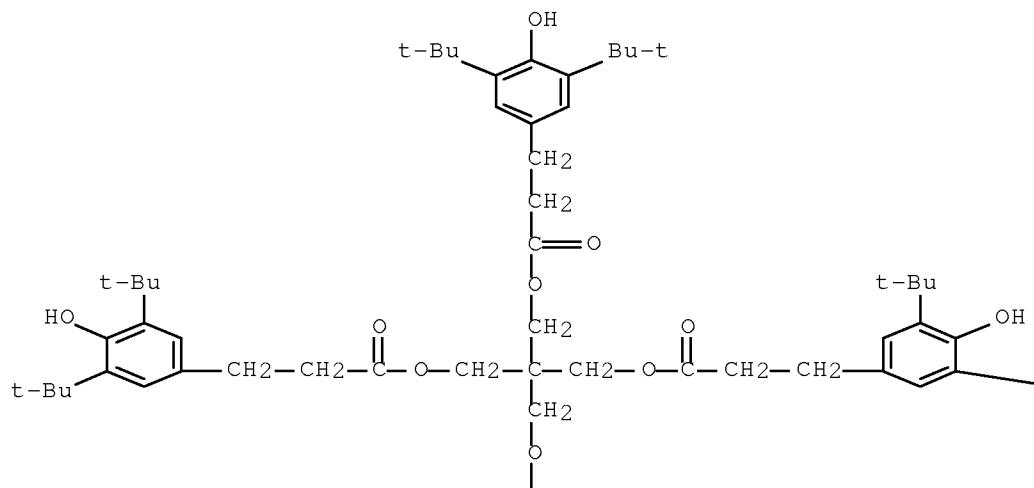
RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture method of universal white masterbatch)  
IT 24937-78-8, Ethylene-vinyl acetate ~~copolymer~~  
106107-54-4D, Butadiene-styrene block ~~copolymer~~,  
hydrogenated  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)  
(manufacture method of universal white masterbatch)  
IT 14807-96-6, Talcum, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(~~powder~~; manufacture method of universal white masterbatch)

L39 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2007:1442492 HCAPLUS Full-text  
DOCUMENT NUMBER: 148:55934  
TITLE: Producing polypropylene-based composition  
~~granulate~~ useful for moldability  
additives  
INVENTOR(S): Minakami, Shigeo; Ryosho, Yuji; Shimizu, Takeshi  
PATENT ASSIGNEE(S): Japan Polypro Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 28pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
-----				
JP 2007326898	A	20071220	JP 2006-157135	200606 06
PRIORITY APPLN. INFO.:			JP 2006-157135	200606 06

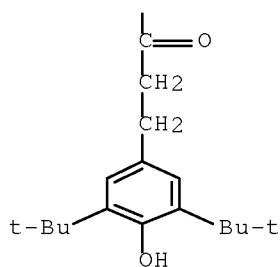
AB The composition containing (A) 70-99 parts crystallizable polypropylene or  
propylene block ~~copolymer~~ prepared by random copolymg. propylene and ethylene  
in the presence of crystallizable polypropylene having MFR >120 g/10 min, and  
(B) 1-30 parts ethylene- $\alpha$ -olefin ~~copolymer~~, wherein the composition has MFR  
50-120 g/10 min, and is cut under water to give ~~granulate~~. Thus, propylene-  
ethylene block ~~copolymer~~ (MFR 544) 90, propylene-ethylene block ~~copolymer~~ (MFR  
33) 10, Irganox 1010 (neopentanetetrayl 3,5-di-tert-butyl-4-  
hydroxyhydrocinnamate) 0.1, Irgafos 168 (tris(2,4-di-tert-butylphenyl)  
phosphite) 0.05, and calcium stearate were kneaded, and cut under water to  
give a title composition ~~granulate~~.  
IT 6683-19-8, Irganox 1010  
RL: MOA (Modifier or additive use); USES (Uses)  
(production of polypropylene-based composition ~~granulate~~ useful  
for moldability ~~additives~~)  
RN 6683-19-8 HCAPLUS  
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
 ST polypropylene propylene ethylene block copolymer  
 granulate moldability additive

IT Fillers  
(inorg.; production of polypropylene-based composition granulate useful for moldability additives)

IT Polysiloxanes, uses  
RL: CAT (Catalyst use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)

IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)

IT 49718-23-2, Methyl hydrogen silane diol homopolymer  
RL: CAT (Catalyst use); USES (Uses)  
(assumed monomer; production of polypropylene-based composition granulate useful for moldability additives)

IT 88-95-9, Phthaloyl dichloride 97-93-8, Triethyl aluminum, uses 100-99-2, uses 754-05-2, Trimethyl vinyl silane 5593-70-4, Titanium tetrabutoxide 7550-45-0, Titanium tetrachloride, uses 7786-30-3, Magnesium chloride, uses 9004-73-3, Poly[oxy(methylsilylene)] 10026-04-7, Silicon tetrachloride 18293-81-7, tert-Butyl methyl dimethoxy silane  
RL: CAT (Catalyst use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)

IT 106565-43-9P, Ethylene-propylene block copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)

IT 1592-23-0, Calcium stearate ~~6683-19-8~~, Irganox 1010 31570-04-4, Irgafos 168  
RL: MOA (Modifier or additive use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)

L39 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:919872 HCAPLUS Full-text

DOCUMENT NUMBER: 147:278544

TITLE: Dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers

INVENTOR(S): Markov, A. V.; Persits, V. G.; Romanov, A. S.; Kopylov, V. M.; Ivanov, V. V.; Kuleznev, V. N.; Slavin, G. S.

PATENT ASSIGNEE(S): OAO "Penta-91", Russia

SOURCE: Russ., 9pp.  
CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
RU 2304597	C1	20070820	RU 2005-141366	20051230

PRIORITY APPLN. INFO.:

RU 2005-141366

200512

30

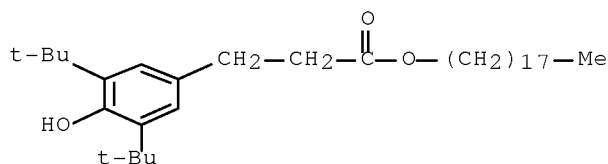
AB Dry dispersed modifier for obtaining cross-linked polymers and  $\alpha$ -olefin copolymers is composed of crosslinking agent which is an unsatd. hydrolyzable organosilane (A), free-radical initiator which is organic peroxide (B), a moisture absorber which is ethoxy- and/or acetoxy silane (C), a hydrolysis/condensation catalyst which is an organic salts of tin, organic derivs. of sulfonic and disulfonic acids (D), a stabilizer/antioxidant which is an organic derivative of tert-butylphenol or Ph phosphite (E), an inorg. finely dispersed filler/absorbent which is an oxide or silicate of metal selected from calcium, magnesium, aluminum, silicon, and titanium, or their mixture (F), and optionally, a binder which is a polyolefin or  $\alpha$ -olefin copolymer (G), at weight ratio of A:B:C:D:E:F:G as (50-65):(3.0-5.0):(5.0-8.0):(1.0-2.5):(6.8-8.0):(15-30):(0-16). The use of this modifier gives a simplified technol. for producing siloxane-linkage cross-linked/vulcanized polymers with reduced production cost and the technol. results in polymers with desirable mech. properties, thermal and chemical stability, and improved appearance of articles produced from polymers.

IT 2082-79-3, Irganox 1076

RL: TEM (Technical or engineered material use); USES (Uses)  
(dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)

IT Inorganic compounds

RL: TEM (Technical or engineered material use); USES (Uses)  
(Agonite; dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)

IT Crosslinking agents

Powders

(dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)

IT Polyolefins

RL: TEM (Technical or engineered material use); USES (Uses)  
(dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)

IT Composition

(modification agent; dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)

IT Crosslinking  
Materials processing  
(polymer; dry powdered modifier composition  
for crosslinking polymers and alpha-olefin copolymers  
through siloxane linkages)

IT 9003-27-4, Polyisobutylene 24937-78-8, Ethylene-vinyl acetate  
copolymer 92815-91-3  
RL: POF (Polymer in formulation); USES (Uses)  
(binder in the composition; dry powdered modifier composition for  
crosslinking polymers and alpha-olefin copolymers  
through siloxane linkages)

IT 77-58-7, Dibutyltin dilaurate 78-63-7 80-43-3, Dicumylperoxide  
4731-77-5, Dibutyltin dicaprylate 13269-61-9, Butylperoxybenzoate  
27176-87-0, Dodecylbenzenesulfonic acid 60223-95-2,  
Dinonylnaphthalenedisulfonic acid  
RL: CAT (Catalyst use); USES (Uses)  
(dry powdered modifier composition for crosslinking  
polymers and alpha-olefin copolymers through siloxane  
linkages)

IT 78-08-0, Vinyltriethoxysilane 128-37-0, Agidol 1, uses  
2082-79-3, Irganox 1076 2768-02-7, Vinyltrimethoxysilane  
4253-34-3, Methyltriacetoxysilane 7631-86-9, Silicon dioxide, uses  
11099-06-2, Ethyl silicate 12244-10-9, Albite 13397-26-7,  
Calcite, uses 13463-67-7, Titanium dioxide, uses 14807-96-6,  
Talc, uses 18169-68-1 31570-04-4, Irgafos 168  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dry powdered modifier composition for crosslinking  
polymers and alpha-olefin copolymers through siloxane  
linkages)

IT 9002-88-4, Polyethylene  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(high or low d., binder in the composition or bulk polymer;  
dry powdered modifier composition for crosslinking  
polymers and alpha-olefin copolymers through siloxane  
linkages)

L39 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:14060 HCAPLUS Full-text

DOCUMENT NUMBER: 146:101705

TITLE: Resin additive composition  
with good handling property and property of  
remaining in a resin

INVENTOR(S): Yukino, Toshinori; Fukushima, Mitsuru; Tanji,  
Naoko; Yokota, Akiko

PATENT ASSIGNEE(S): Adeka Corporation, Japan

SOURCE: PCT Int. Appl., 27pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
----- WO 2007000876	----- A1	----- 20070104	----- WO 2006-JP311249	200606 05

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,  
 KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG,  
 MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
 IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,  
 TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 EP 1897914 A1 20080312 EP 2006-756995  
 200606  
 05  
 R: DE, FR, GB  
 CN 101213260 A 20080702 CN 2006-80023762  
 200712  
 28  
 US 20090088513 A1 20090402 US 2007-994203  
 200712  
 28  
 PRIORITY APPLN. INFO.: JP 2005-189728 A  
 200506  
 29  
 WO 2006-JP311249 W  
 200606  
 05

## OTHER SOURCE(S): MARPAT 146:101705

AB The composition is obtained by impregnating a powdery inorg. material (A) with a resin additive (B) in advance, wherein an oil absorption of A is >150 mL/100 g. Thus, 30 parts Neusilin US2 (aluminum magnesium silicate) and 70 parts mixture of 2,2,6,6-tetramethyl-4-piperidinyl hexadecanoate and 2,2,6,6-tetramethyl-4-piperidinyl octadecanoate were mixed to give a title composition, 0.4 parts of which was kneaded with polypropylene 100, calcium stearate 0.1, tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane 0.1, tris(2,4-di-tert-butylphenyl)phosphite 0.05, and hexadecyl 3,5-di-tert-butyl-4-hydroxybenzoate 0.1 parts at 250° to give a resin composition

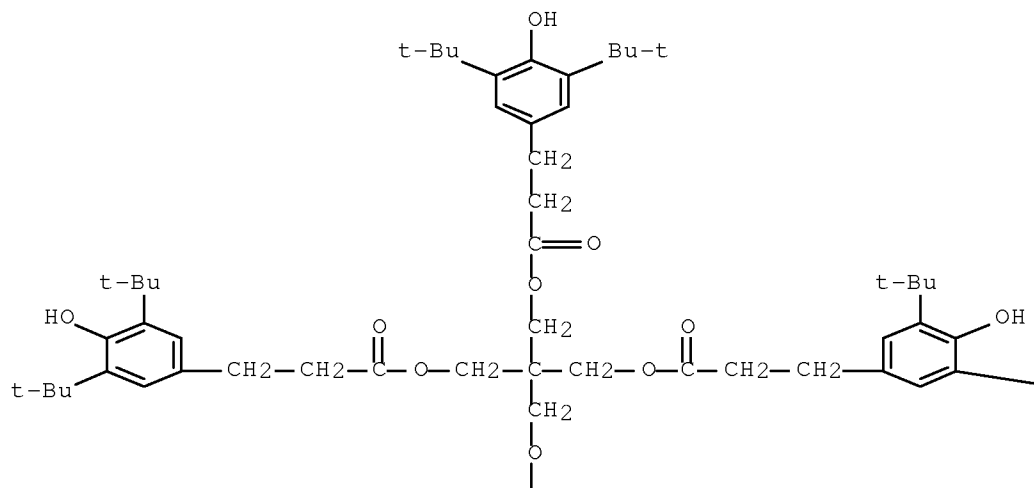
IT 6683-19-8, Tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane

RL: MOA (Modifier or additive use); USES (Uses)  
 (resin additive composition with good handling property and property of remaining in a resin)

RN 6683-19-8 HCAPLUS

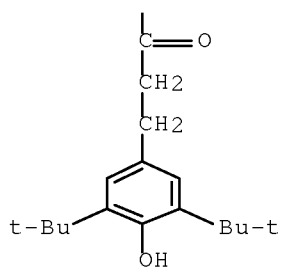
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
 ST ~~additive resin~~ compn inorg powder  
 IT Amines, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(hindered; ~~resin additive~~ composition with good  
handling property and property of remaining in a ~~resin~~)

IT UV stabilizers  
(~~resin additive~~ composition with good handling  
property and property of remaining in a ~~resin~~)

IT 1344-95-2, Calcium silicate  
RL: MOA (Modifier or additive use); USES (Uses)  
(Florite RT; ~~resin additive~~ composition with good  
handling property and property of remaining in a ~~resin~~)

IT 101-02-0, Triphenylphosphite 1592-23-0, Calcium stearate  
1843-05-6, 2-Hydroxy-4-octyloxybenzophenone ~~6683-19-8~~,  
Tetrakis[3-(3,5-di-tert-butyl-4-  
hydroxyphenyl)propionyloxymethyl]methane 7631-86-9, Mizukasil  
P-526, uses 12511-31-8, Neusilin US2 24860-22-8,  
2,2,6,6-Tetramethyl-4-piperidinyl octadecanoate 31570-04-4,  
Tris(2,4-di-tert-butylphenyl)phosphite 54065-80-4, Kyowaad 700  
67845-93-6, Hexadecyl 3,5-di-tert-butyl-4-hydroxybenzoate  
85916-01-4, 2,2,6,6-Tetramethyl-4-piperidinyl hexadecanoate  
112760-18-6, Kyowaad 2100  
RL: MOA (Modifier or additive use); USES (Uses)  
(~~resin additive~~ composition with good handling  
property and property of remaining in a ~~resin~~)

IT 9003-07-0, Polypropylene  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(~~resin additive~~ composition with good handling  
property and property of remaining in a ~~resin~~)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD (2 CITINGS)

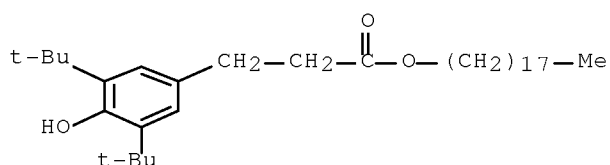
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L39 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2006:940368 HCAPLUS Full-text  
DOCUMENT NUMBER: 145:336787  
TITLE: Production process of ~~dust-free~~  
composite ~~additive~~ for ~~polymer~~  
INVENTOR(S): Yang, Baozhu; Guo, Sheng; Diao, Chunsen; Liu,  
Jizhao; Shi, Zhijian; Peng, Guolin; Zhao,  
Yanbin; Lian, Yebo; Wang, Shuhong  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
9pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
CN 1702103	A	20051130	CN 2004-10024142	200405 24
CN 1274746	C	20060913		
PRIORITY APPLN. INFO.:			CN 2004-10024142	200405 24

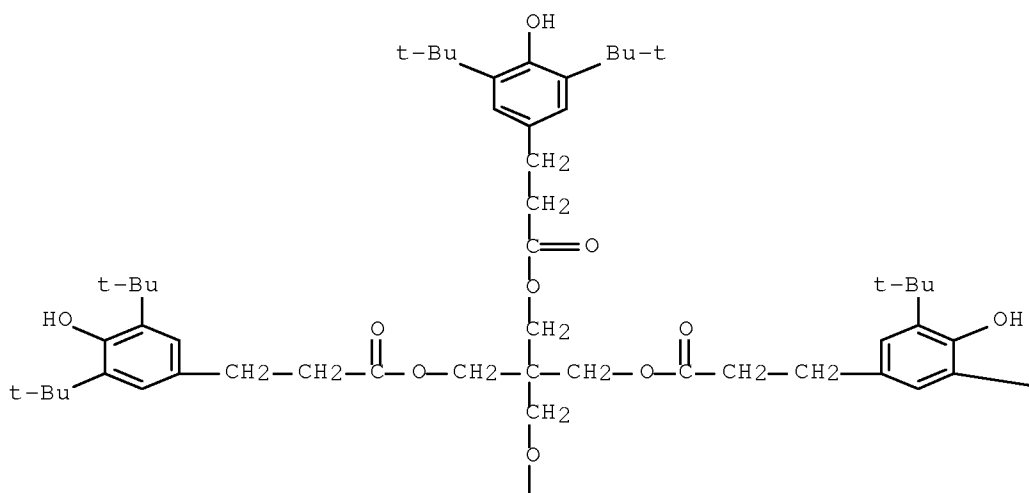


- AB The title production process comprises (1) ~~mixing~~ additive components of low m.p. 10-90 wt%, and additive components of high m.p. 10-90 wt%; (2) extruding at a temperature to melt low m.p. components while keep high m.p. components un-molten; and (3) calendering, cooling, crushing, and classifying. The obtained ~~granular~~ additive of irregular polyhedral shape with diameter of 0.1-10 mm has high mech. strength and wide adaptability.
- IT 2082-79-3, n-Octadecyl-3-(4'-hydroxy-3',5'-di-tert-butyl phenyl)propionate 6683-19-8, Pentaerythrityl tetrakis (3,5-di-tert-butyl-4-hydroxyphenyl)propionate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (production process of ~~dust-free~~ composite additive for polymer)
- RN 2082-79-3 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



- RN 6683-19-8 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

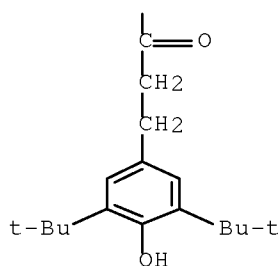
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



- IC ICM C08K009-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST dust free composite additive polymer  
 IT Polyamides, uses  
 Polycarbonates, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (production process of dust-free composite additive for polymer)  
 IT Polyolefins  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (production process of dust-free composite additive for polymer)  
 IT 112-84-5, Erucyl amide 557-05-1, Zinc stearate 1592-23-0, Calcium stearate 2082-79-3, n-Octadecyl-3-(4'-hydroxy-3',5'-di-tert-butyl phenyl)propionate 6683-19-8, Pentaerythrityl tetrakis (3,5-di-tert-butyl-4-hydroxyphenyl)propionate 7631-86-9, Silica, uses 10213-78-2, N,N-Bis(2-hydroxyethyl)stearylamine 31570-04-4, Tris(2,4-di-tert-butyl-phenyl)phosphite 88608-79-1, 1,3,2,4-Di(ethylbenzylidene) sorbitol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (production process of dust-free composite additive for polymer)  
 IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-28-5, Poly(1-butene) 9003-53-6, Polystyrene

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(production process of ~~dust~~-free composite ~~additive~~ for polymer)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L39 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2006:608718 HCAPLUS Full-text  
 DOCUMENT NUMBER: 145:46716  
 TITLE: Non-powdery compositions of additives for plastics  
 INVENTOR(S): Malucelli, Decio; Consalvi, Marco; Pradella, Fiorella; Fait, Anna  
 PATENT ASSIGNEE(S): Basell Poliolefine Italia S.r.l., Italy  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006064006	A1	20060622	WO 2005-EP56752	20051213
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005315598	A1	20060622	AU 2005-315598	20051213
CA 2591085	A1	20060622	CA 2005-2591085	20051213
EP 1824909	A1	20070829	EP 2005-817553	20051213
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 101076553	A	20071121	CN 2005-80042628	20051213
JP 2008524361	T	20080710	JP 2007-546046	20051213
BR 2005017180	A	20080930	BR 2005-17180	200512

KR 2007087560	A	20070828	KR 2007-710920	13
				200705
				14
US 20080119606	A1	20080522	US 2007-793192	200706
				14
IN 2007CN02602	A	20070907	IN 2007-CN2602	200706
				18
PRIORITY APPLN. INFO.:		EP 2004-29976	A	200412
				17
		US 2005-664481P	P	200503
				23
		WO 2005-EP56752	W	200512
				13

AB The compns. comprise: (A) 1-25% of a polyolefin matrix comprising one or more polyolefins having a m.p.  $\leq 160^\circ$ , and (B) 75-99% of one or more solid additives for polymers. Thus, 1-butene homopolymer 9.1, Irganox 1010 (antioxidant) 22.7, Irgafos 168 (antioxidant) 44.5, and calcium stearate 22.7% were kneaded and extruded at  $120^\circ$  to give a title composition

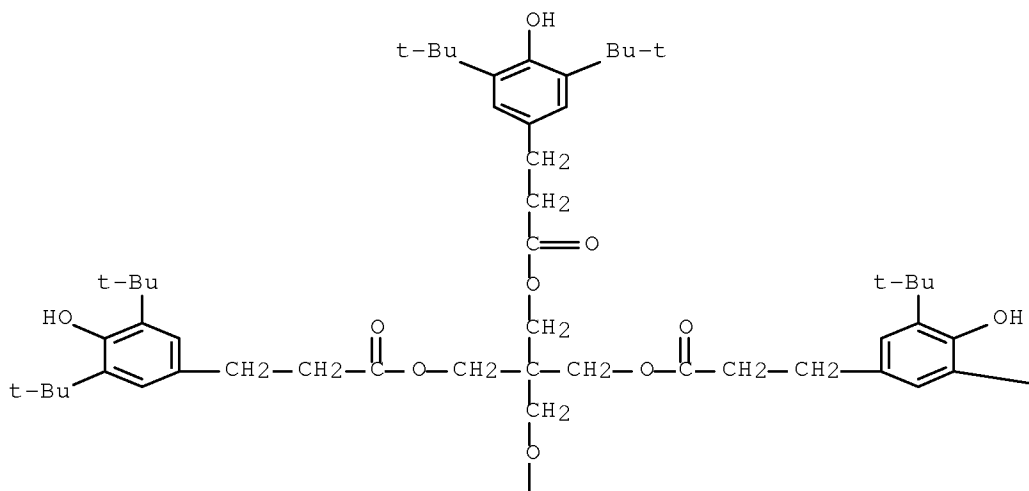
IT 6683-19-8, Irganox 1010

RL: MOA (Modifier or additive use); USES (Uses)  
(non-powdery compns. of additives for plastics)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

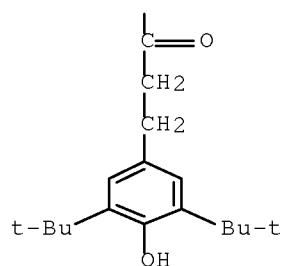
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
IT 532-32-1, Sodium benzoate 1592-23-0, Calcium stearate  
6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
135861-56-2, Millad 3988  
RL: MOA (Modifier or additive use); USES (Uses)  
(non-powdery compns. of additives for plastics)  
IT 9003-28-5 25087-34-7, Ethylene-1-butene copolymer  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PYP (Physical process); PROC (Process); USES (Uses)  
(non-powdery compns. of additives for plastics)  
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:817827 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:292973  
TITLE: Granular polymer  
additives and their preparation  
INVENTOR(S): Semen, John  
PATENT ASSIGNEE(S): Albemarle Corp., USA  
SOURCE: U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of  
U.S. Ser. No. 528,675.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English

July 26, 2009

10/586,707

30

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 20030193041	A1	20031016	US 2001-792087	20010223
US 6821456	B2	20041123		
US 6056898	A	20000502	US 1998-158588	19980922
US 6126862	A	20001003	US 1998-203941	19981202
US 6126863	A	20001003	US 1998-204121	19981202
US 6800228	B1	20041005	US 2000-528675	20000320
CA 2438893	A1	20020906	CA 2001-2438893	20010918
WO 2002068523	A1	20020906	WO 2001-US42196	20010918
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1363972	A1	20031126	EP 2001-979895	20010918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004529997	T	20040930	JP 2002-568627	20010918
US 20050009725	A1	20050113	US 2004-911253	20040804
US 7425290	B2	20080916		
US 20090054698	A1	20090226	US 2008-201379	20080829
PRIORITY APPLN. INFO.:			US 1998-158588	A2 19980922
			US 1998-203941	A2 19981202
			US 1998-204121	A2 19981202
			US 2000-528675	A2 200003

20

US 2001-792087

A

200102

23

WO 2001-US42196

W

200109

18

US 2004-911253

A3

200408

04

AB A compacted particulate polymer additive composition in a dry granular form formed from a substantially uniform mixture of the following components: (a) at least one particulate sterically-hindered phenolic compound, and (b) one or more particulate polymer additives other than a sterically-hindered phenolic compound; wherein the particles of the composition are held together in compacted dry granular form exclusively or substantially exclusively by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (a), and optionally by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (b). Compns. of this type except that there is no component (b) are also described.

IT 6683-19-8, Irganox 1010

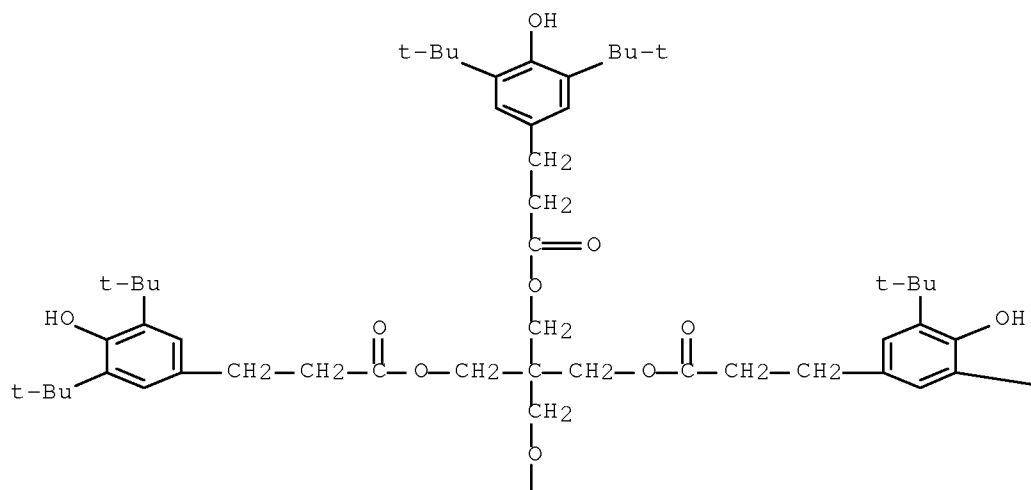
RL: MOA (Modifier or additive use); USES (Uses)

(granular polymer additives and  
their preparation)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

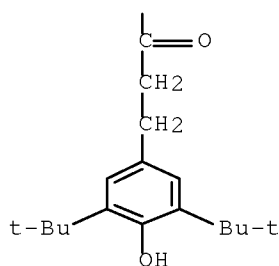
PAGE 1-A



PAGE 1-B

—Bu-t

PAGE 2-A



IC ICM C09K015-22  
 ICS C09K015-32  
 INCL 252400240; 252403000  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST hindered phenol additive granule polymer  
 IT Antioxidants  
 Crystal nucleating agents  
 Light stabilizers  
 (granular polymer additives and  
 their preparation)  
 IT Phosphites  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (granular polymer additives and  
 their preparation)  
 IT Phenols, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (hindered; granular polymer additives  
 and their preparation)  
 IT 532-32-1, Sodium benzoate 1709-70-2, ETHANOX 330  
 6683-19-8, Irganox 1010 11097-59-9, DHT-4A 19046-64-1,  
 1,3:2,4-Di-O-benzylidenesorbitol 26741-53-7,  
 Bis(2,4-di-tert-butylphenyl)pentaerythritol diphosphite  
 27676-62-6, 1,3,5-Tris(3,5-di-tert-butyl-4-  
 hydroxybenzyl)isocyanurate 31570-04-4, Irgafos 168 81541-12-0,  
 1,3:2,4-Bis-(p-methylbenzylidene)sorbitol 135861-56-2,  
 1,3:2,4-Bis(3,4-dimethylbenzylidene)sorbitol 215392-42-0, Ultrinox



627A

RL: MOA (Modifier or additive use); USES (Uses)  
(granular polymer additives and  
their preparation)

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L39 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:886197 HCAPLUS Full-text

DOCUMENT NUMBER: 137:385493

TITLE: Granular additive compositions, their  
manufacture, and polyolefin compositions and  
moldings

INVENTOR(S): Kamioka, Kazuaki; Ishikawa, Masahide

PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

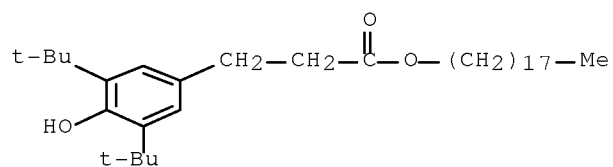
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2002332359	A	20021122	JP 2001-140005	200105 10
PRIORITY APPLN. INFO.:				200105 10

AB Title additive compns. comprise (A) 40-60% of  $\geq 1$  dibenzylidenesorbitols with m.p.  $\geq 250^\circ$  and (B)  $\geq 2$  compds. selected from antioxidants, antacids, and lubricants. In the compns.,  $\geq 1$  of B has m.p. or softening temperature  $\leq 140^\circ$ . The compns. are manufactured by (1) mixing A powders and B powders, (2) extruding the powdered mixts. while controlling temperature of the mixts. at die plates of extruders to  $T_m - (T_m + 30)^\circ$  ( $T_m$  = lowest m.p. or softening temperature of B), and granulating. Thus, Gel All MD [I; 1,3:2,4-di(p-methylbenzylidene)sorbitol], Irganox 1010 [tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane], Irgafos 168 [tris(2,4-di-tert-butylphenyl) phosphite], and Calcium Stearate CP (Ca stearate) were mixed and extruded at .apprx.  $120^\circ$  to give a composition with good storage stability. Then, the composition was mixed with ethylene-propylene isotactic copolymer, pelletized, and injection molded to give a test piece showing good dispersibility of I as nucleating agents.

IT 2082-79-3, Irganox 1076 6683-19-8, Irganox  
1010 36443-68-2, Triethylene glycol  
bis[3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate  
RL: MOA (Modifier or additive use); USES (Uses)  
(antioxidants; granular dibenzylidenesorbitol-containing  
additives with good storage stability for polyolefins)

RN 2082-79-3 HCAPLUS

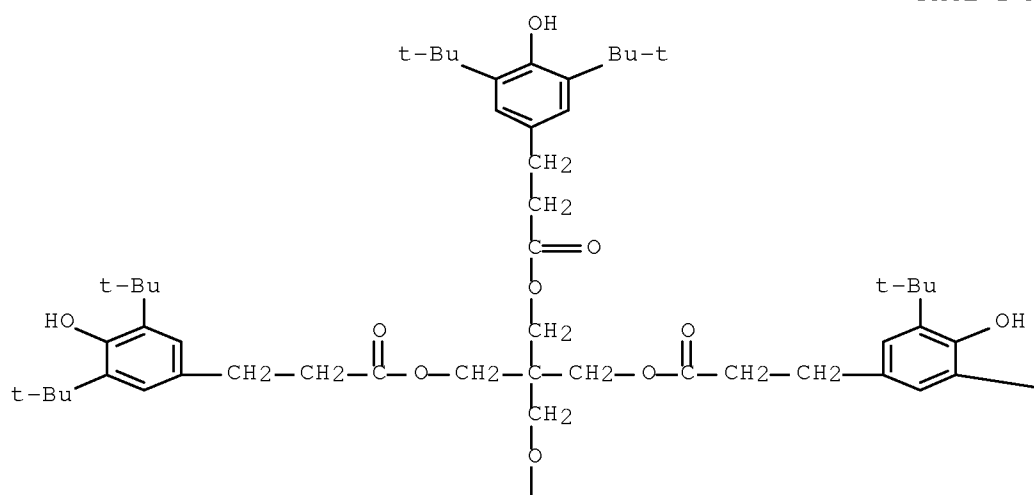
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
octadecyl ester (CA INDEX NAME)



RN 6683-19-8 HCAPLUS

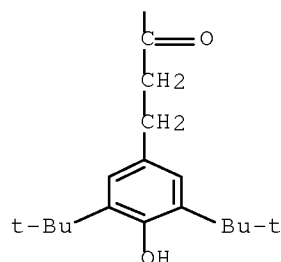
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

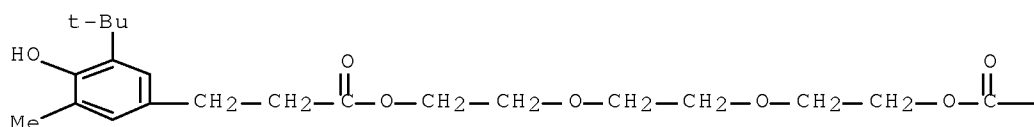
PAGE 2-A



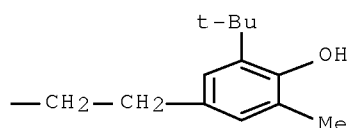
RN 36443-68-2 HCAPLUS

CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy-5-methyl-,  
1,1'-[1,2-ethanediylbis(oxy-2,1-ethanediyl)] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM C08J003-12  
ICS B29B009-02; B29C047-78; C08J003-20; C08J005-00; C08K003-22;  
C08K003-26; C08K005-053; C08K005-098; C08K005-13; C08K005-20;  
C08K005-3477; C08K005-52; C08L023-00; B29K023-00
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38
- IT Carbonates, uses  
Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(antacids; granular dibenzylidenesorbitol-containing  
additives with good storage stability for polyolefins)
- IT Antacids  
Antioxidants  
Lubricants  
(binders; granular dibenzylidenesorbitol-containing  
additives with good storage stability for polyolefins)
- IT Crystal nucleating agents  
(dibenzylidenesorbitols; granular  
dibenzylidenesorbitol-containing additives with good storage  
stability for polyolefins)
- IT Binders  
(granular dibenzylidenesorbitol-containing additives with  
good storage stability for polyolefins)
- IT Molded plastics, uses

## Polyolefins

RL: POF (Polymer in formulation); USES (Uses)

(~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

## IT Fatty acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

(metal salts, antacids; ~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

## IT 1592-23-0, Calcium stearate

RL: MOA (Modifier or additive use); USES (Uses)

(Calcium Stearate CP, antacids; ~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

## IT 11097-59-9, DHT 4A

RL: MOA (Modifier or additive use); USES (Uses)

(antacids; ~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

IT 119-47-1, 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) 128-37-0, 2,6-Di-tert-butyl-4-methylphenol, uses 1709-70-2, 1,3,5-Tris(3,5-di-tert-butyl-4-hydroxybenzyl)-2,4,6-trimethylbenzene 2082-79-3, Irganox 1076 3806-34-6, Distearylpentaerythritol diphosphite 6683-19-8, Irganox 1010 26741-53-7, Bis(2,4-di-tert-butylphenyl)pentaerythritol diphosphite 27676-62-6, 1,3,5-Tris(3,5-di-tert-butyl-4-hydroxybenzyl) isocyanurate 31570-04-4, Irgafos 168 36443-68-2, Triethylene glycol bis[3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate 86624-80-8, Tetrakis(2,4-di-tert-butylphenyl)-4,4'-biphenylene diphosphite

RL: MOA (Modifier or additive use); USES (Uses)

(antioxidants; ~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

## IT 56453-76-0, Ethylene-propylene isotactic copolymer

RL: POF (Polymer in formulation); USES (Uses)

(~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

IT 112-84-5, Amide E 123-28-4, Dilauryl 3,3'-thiodipropionate 124-26-5, Amide S 300-92-5, Aluminum distearate 301-02-0, Amide O-N 557-04-0, Magnesium stearate 557-05-1, Zinc stearate 593-29-3, Potassium stearate 637-12-7, Aluminum tristearate 693-36-7, Distearyl 3,3'-thiodipropionate 822-16-2, Sodium stearate 2452-01-9, Zinc laurate 6865-33-4, Calcium ricinolate 13040-19-2, Zinc ricinoleate 16529-65-0, Zinc behenate 16545-54-3, Dimyristyl 3,3'-thiodipropionate 27215-38-9, Glycerin monolaurate 31566-31-1, Rikemal S 100 43168-33-8, Magnesium behenate 52258-47-6, Calcium montanate

RL: MOA (Modifier or additive use); USES (Uses)

(lubricants; ~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

IT 81541-11-9 81541-12-0, Gel All MD 135861-56-2, Millad 3988 475985-64-9

RL: MOA (Modifier or additive use); USES (Uses)

(nucleating agents; ~~granular~~ dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

July 26, 2009

10/586,707

37

TITLE: Granular polymer  
additives and their preparation  
INVENTOR(S): Semen, John  
PATENT ASSIGNEE(S): Albemarle Corporation, USA  
SOURCE: PCT Int. Appl., 37 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 7  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
WO 2002068523	A1	20020906	WO 2001-US42196	200109 18
W: CA, JP RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 20030193041	A1	20031016	US 2001-792087	200102 23
US 6821456	B2	20041123		
CA 2438893	A1	20020906	CA 2001-2438893	200109 18
EP 1363972	A1	20031126	EP 2001-979895	200109 18
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004529997	T	20040930	JP 2002-568627	200109 18
PRIORITY APPLN. INFO.:			US 2001-792087	A 200102 23
			US 1998-158588	A2 199809 22
			US 1998-203941	A2 199812 02
			US 1998-204121	A2 199812 02
			US 2000-528675	A2 200003 20
			WO 2001-US42196	W 200109 18

AB A compacted particulate polymer additive composition in a dry granular form formed from a substantially uniform mixture of the following components: (a) at least one particulate sterically-hindered phenolic compound, and (b) one or more particulate polymer additives other than a sterically-hindered phenolic compound; wherein the particles of said composition are held together in compacted dry granular form exclusively or substantially exclusively by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (a), and optionally by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (b). Compns. of this type except that there is no component (b) are also described.

IT 6683-19-8, Irganox 1010

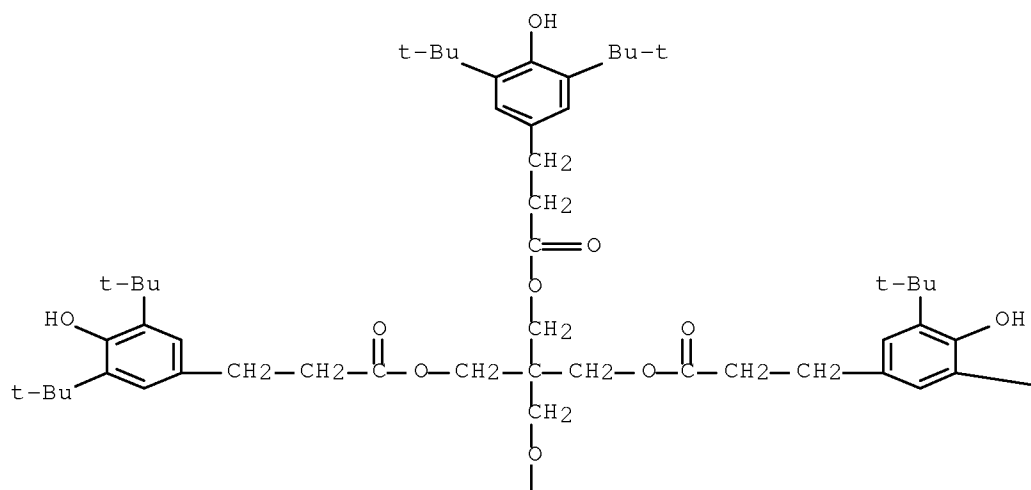
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(granular polymer additives prepared from desolvated additive particles preparation)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

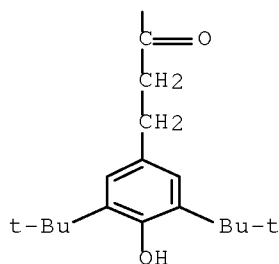
PAGE 1-A



PAGE 1-B

—Bu-t

PAGE 2-A



- IC ICM C08K005-13  
ICS B01J002-00; B29B009-00
- CC 37-6 (Plastics Manufacture and Processing)
- ST granular sterically hindered phenol additive  
polymer
- IT Neutralization  
(agents, other additives; granular  
polymer additives prepared from desolvated  
additive particles of sterically hindered phenols and,  
optionally, other additives)
- IT Antioxidants  
(granular polymer additives prepared  
from desolvated additive particles of sterically hindered phenols  
and, optionally, other additives)
- IT Phenols, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PYP (Physical process); PROC (Process); USES  
(Uses)  
(hindered; granular polymer additives  
prepared from desolvated additive particles of sterically hindered  
phenols and, optionally, other additives)
- IT Crystal nucleating agents  
Light stabilizers  
UV stabilizers  
(other additives; granular polymer  
additives prepared from desolvated additive particles of

sterically hindered phenols and, optionally, other additives)

IT Carbonates, uses  
Layered double hydroxides  
Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(other additives; granular polymer additives prepared from desolvated additive particles of sterically hindered phenols and, optionally, other additives)

IT 11097-59-9, DHT 4A  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(DHT 4A, other additive; granular polymer additives prepared from desolvated additive particles preparation)

IT 215392-42-0, Ultrinox 627A  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(Ultrinox 627A, other additive; granular polymer additives prepared from desolvated additive particles preparation)

IT 1709-70-2, 1,3,5-Trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl)benzene 27676-62-6, Tris(3,5-di-tert-butyl-4-hydroxybenzyl) isocyanurate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(granular polymer additives prepared from desolvated additive particles of sterically hindered phenols and, optionally, other additives)

IT 6683-19-8, Irganox 1010  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(granular polymer additives prepared from desolvated additive particles preparation)

IT 532-32-1, Sodium benzoate 19046-64-1, 1,3:2,4-Di-O-benzylidenesorbitol 26741-53-7, Bis(2,4-di-tert-butylphenyl)pentaerythritol diphosphite 31570-04-4, Tris(2,4-di-tert-butylphenyl) phosphite 81541-12-0, 1,3:2,4-Bis(p-methylbenzylidene)sorbitol 135861-56-2, 1,3:2,4-Bis(3,4-dimethylbenzylidene)sorbitol  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(other additive; granular polymer additives prepared from desolvated additive particles of sterically hindered phenols and, optionally, other additives)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

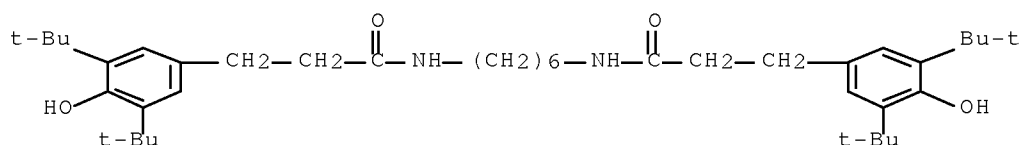
L39 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2001:788914 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:345201  
TITLE: Mixing method of resins and additives for manufacturing uniform



INVENTOR(S): ~~mixtures~~ Kawasaki, Hiroyuki; Kanemasa, Tomoaki; Ishikawa, Hiroyuki; Morita, Kazumasa  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2001302803	A	20011031	JP 2000-122201	200004 24
JP 3736280	B2	20060118		
PRIORITY APPLN. INFO.:			JP 2000-122201	200004 24

AB The method comprises removing powdered resins stucked on resin particle surface to ≤100 ppm, covering resin particle surface with spreading agents, and mixing with powdered additives. Thus, polyamide pellets (Novamid 1022S) was washed with water, covered with ethylene oxide-sorbitan monolaurate adduct (Nonion LT 221), and mixed with 1000 ppm ethylenebis(stearylamide) (Armowax EBS) (A) and 1000 ppm N,N'-hexamethylenebis(3,5-di-tert-butyl-4-hydroxyphenylamine) (Irganox 1098) (B) to give a composition showing dropped amount of A 2 ppm and B 3 ppm after shaking.  
 IT 23128-74-7, Irganox 1098  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antioxidant; mixing method of resins and additives for manufacturing uniform mixts.)  
 RN 23128-74-7 HCAPLUS  
 CN Benzenepropanamide, N,N'-1,6-hexanediylbis[3,5-bis(1,1-dimethylethyl)-4-hydroxy- (CA INDEX NAME)



IC ICM C08J003-20  
 ICS B29B007-50; B29K067-00; B29K069-00; B29K077-00; C08L067-00;  
 C08L069-00; C08L077-00; C08L101-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST polyamide pellet mixing lubricant antioxidant  
 IT Polyamides, properties  
 Polycarbonates, properties  
 Polyesters, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (mixing method of resins and additives for manufacturing uniform mixts.)

IT 23128-74-7, Irganox 1098  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antioxidant; mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 110-30-5, Armowax EBS  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (lubricant; mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 371115-50-3, Novamid 1022S  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
 or engineered material use); USES (Uses)  
 (mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 9005-64-5, Nonion LT 221  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (spreading agent; mixing method of resins and  
 additives for manufacturing uniform mixts.)

L39 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:636136 HCAPLUS Full-text

DOCUMENT NUMBER: 135:211772

TITLE: Addition of stabilizer additives to  
 polymer particles for rotational molding

INVENTOR(S): Fatnes, Anne Marie; Oysaed, Harry; Frohaug,  
 Astrid; Jamtvedt, Svein

PATENT ASSIGNEE(S): Borealis Technology Oy, Finland

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062833	A1	20010830	WO 2001-GB721	20010221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261660	A1	20021204	EP 2001-907891	20010221
EP 1261660	B1	20041222		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001008532	A	20030422	BR 2001-8532	20010221
JP 2003524046	T	20030812	JP 2001-562612	200102

21				
	AU 2001235759	B2	20040304	AU 2001-235759
200102				
21				
	AT 285434	T	20050115	AT 2001-907891
200102				
21				
	ES 2230275	T3	20050501	ES 2001-907891
200102				
21				
	CN 1252150	C	20060419	CN 2001-805373
200102				
21				
	KR 794906	B1	20080114	KR 2002-710834
200208				
20				
	US 20030146542	A1	20030807	US 2002-204271
200209				
12				
	PRIORITY APPLN. INFO.:		GB 2000-4043	A
200002				
21				
			WO 2001-GB721	W
200102				
21				

AB A polyolefin polymer powder for use in rotational molding requires the presence of stabilizers, including UV-stabilizers, to prevent degradation during processing and use. Rotomolding polymer particles comprises (i) obtaining many polyolefin polymer particles having a mean particle size 1-2000  $\mu$ m, (ii) heating a mixture of (A)  $\geq 1$  phenolic antioxidant, (B)  $\geq 1$  organic phosphite or phosphonite antioxidant, (C)  $\geq 1$  UV-stabilizer selected from Chimassorb 2020, Cyasorb UV 3346, Chimassorb 944, Cyasorb 4042 or Cyasorb 4611, (D) a diluent, and optionally (E) a metal stearate, to 20-200°, (iii) depositing the mixture onto the polyolefin polymer particles, and optionally (iv) blending a metal stearate to the resulting polyolefin polymer particles if component E was not present in the mixture

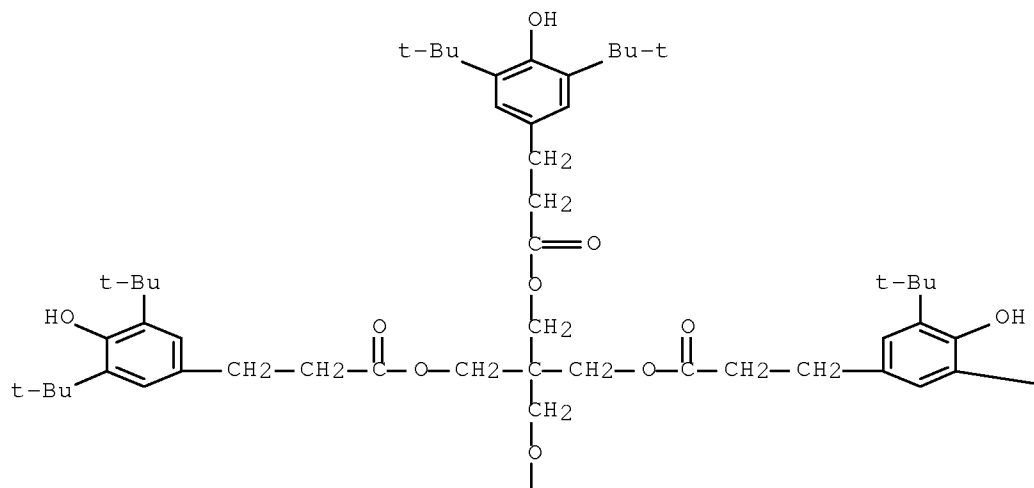
IT 6683-19-8, Irganox 1010

RL: MOA (Modifier or additive use); USES (Uses)  
(phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
for rotomolding polymer particles)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

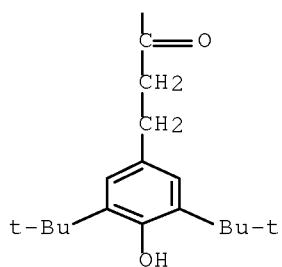
PAGE 1-A



PAGE 1-B

Chemical structure diagram showing a 3,5-di-tert-butyl-4-hydroxybenzyl group (a benzene ring with  $\text{OH}$  at position 4,  $\text{t-Bu}$  at positions 3 and 5, and a  $\text{CH}_2$  group at position 1).

PAGE 2-A



IC ICM C08J003-20  
ICS C08K005-00; C08K005-134; C08K005-52; C08K005-34; C08K005-098;  
C08L023-02

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38

ST antioxidant UV stabilizer rotomolding polyolefin powder

IT Antioxidants  
 Heat stabilizers  
 UV stabilizers  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)

IT Molding of plastics and rubbers  
 (rotational; phenolic antioxidants/phosphite heat stabilizers/UV  
 stabilizers for rotomolding polymer particles)

IT 357396-94-2, Cyasorb 4042  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)

IT 557-05-1, Zinc stearate 2082-79-3, Irganox 1076  
~~6683-19-8~~, Irganox 1010 26523-78-4, Tris(nonylphenyl)  
 phosphite 31570-04-4, Irgafos 168 38613-77-3, Irgafos P-EPQ  
 71878-19-8, Chimassorb 944 90751-07-8, Cyasorb UV 3346  
 145650-60-8, Irgafos 38 161717-32-4, Ultrinox 641 195300-91-5,  
 Chimassorb 2020 357407-76-2, Cyasorb 4611  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 25213-02-9,  
 Ethylene-1-hexene copolymer  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
 formulation); PROC (Process); USES (Uses)  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
 RECORD (2 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L39 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:338126 HCAPLUS Full-text

DOCUMENT NUMBER: 134:341271

TITLE: Mixtures of additives in granular form  
 for organic polymers

INVENTOR(S): Neri, Carlo; Callierotti, Corrado

PATENT ASSIGNEE(S): Great Lakes Chemical (Europe) GmbH, Switz.

SOURCE: Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 1097965	A1	20010509	EP 2000-203647	200010 19
EP 1097965	B1	20050330		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
IT 99MI2205	A1	20010423	IT 1999-MI2205	

199910  
21

IT 1315251 B1 20030203  
US 20080194766 A1 20080814 US 2008-16780

200801  
18

PRIORITY APPLN. INFO.: IT 1999-MI2205 A

199910  
21

US 2000-692025 B1

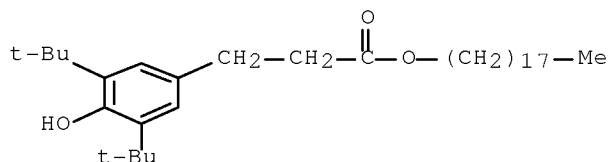
200010  
19

AB Mixts. of additives in granular form comprising  $\geq 1$  stabilizers for organic polymers,  $\geq 1$  organic or inorg. pigments, and/or  $\geq 1$  dyes, were obtained by extrusion at a temperature capable of enabling the partial or total melting of the lowest-melting component. The above mixts. can be used in the stabilization and dyeing of organic polymers.

IT 2082-79-3, Octadecyl  
3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate  
RL: MOA (Modifier or additive use); USES (Uses)  
(antioxidant; Mixts. of additives in granular form for organic polymers)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
octadecyl ester (CA INDEX NAME)



IC ICM C08K005-00  
ICS B01J002-20; C08J003-22

CC 38-2 (Plastics Fabrication and Uses)  
Section cross-reference(s): 37

ST org polymer additive granular form;  
stabilizer antioxidant pigment dye

IT Antioxidants  
Dyes  
Extrusion, nonbiological  
Fillers  
Light stabilizers  
Pigments, nonbiological  
Stabilizing agents  
(Mixts. of additives in granular form for organic polymers)

IT Carbonates, uses  
Kaolin, uses  
Silicates, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(filler pigment; Mixts. of additives in granular form for organic polymers)

IT Carbon black, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(inorg. pigment; Mixts. of additives in granular form  
for organic polymers)

IT Amines, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(sterically hindered, N-alkoxy derivs., as light stabilizer;  
Mixts. of additives in granular form for organic  
polymers)

IT Group VIA element compounds  
Silicates, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(thiosilicates, filler pigment; Mixts. of additives in  
granular form for organic polymers)

IT 2082-79-3, Octadecyl  
3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate  
RL: MOA (Modifier or additive use); USES (Uses)  
(antioxidant; Mixts. of additives in granular  
form for organic polymers)

IT 1592-23-0, Calcium stearate  
RL: MOA (Modifier or additive use); USES (Uses)  
(co-stabilizer; Mixts. of additives in granular form  
for organic polymers)

IT 13462-86-7, Barite 14807-96-6, Talc, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(filler pigment; Mixts. of additives in granular form  
for organic polymers)

IT 1309-37-1, Iron oxide, uses 1314-13-2, Zinc oxide, uses  
13463-67-7, Titanium dioxide, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(inorg. pigment; Mixts. of additives in granular form  
for organic polymers)

IT 65-85-0D, Benzoic acid, ester derivs., uses 79-10-7D, Acrylic  
acid, ester derivs. 117-99-7D, derivs. 10096-91-0D,  
2-(2'-Hydroxyphenyl)benzotriazole, derivs. 14848-04-5,  
2-(2-Hydroxyphenyl)-1,3,5-triazine  
RL: MOA (Modifier or additive use); USES (Uses)  
(light stabilizer; Mixts. of additives in granular form  
for organic polymers)

IT 12769-96-9, Ultramarine violet  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigment; Mixts. of additives in granular form for organic  
polymers)

IT 31570-04-4, Tris(2,4-di-tert-butylphenyl)phosphite  
RL: MOA (Modifier or additive use); USES (Uses)  
(polymer additive; Mixts. of  
additives in granular form for organic  
polymers)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2000:210252 HCAPLUS Full-text  
DOCUMENT NUMBER: 132:251898  
TITLE: Stabilized water-soluble polymer  
powders on the basis of polyoxyalkylene  
glycol carboxylates and their manufacture  
INVENTOR(S): Albrecht, Gerhard; Weichmann, Josef; Wutz,  
Konrad; Bichler, Manfred; Kern, Alfred

July 26, 2009

10/586,707

48

PATENT ASSIGNEE(S): SKW Trostberg Aktiengesellschaft, Germany  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
WO 2000017263	A1	20000330	WO 1999-EP7103	199909 23
W: AU, CA, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19843730	A1	20000330	DE 1998-19843730	199809 24
CA 2344546	A1	20000330	CA 1999-2344546	199909 23
CA 2344546	C	20080212		
AU 9963291	A	20000410	AU 1999-63291	199909 23
AU 750708	B2	20020725		
EP 1124892	A1	20010822	EP 1999-950546	199909 23
EP 1124892	B1	20040922		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002526583	T	20020820	JP 2000-574169	199909 23
AT 277112	T	20041015	AT 1999-950546	199909 23
ES 2229775	T3	20050416	ES 1999-950546	199909 23
US 6573316	B1	20030603	US 2000-720922	200012 28
PRIORITY APPLN. INFO.:			DE 1998-19843730	A 199809 24
			WO 1999-EP7103	W 199909 23

AB The stabilized polymer powders, especially useful in manufacture of concrete, contain 0.01-10 weight% of a stabilizer selected from phenols, amines, phosphites, thio ethers, and thio acids, the stabilizer having been added to the aqueous polymer solution in liquid or dissolved form before conversion into a powder. Polymer powders thus protected against autoignition and oxidative degradation present unexpectedly high oxidative thermal stability



even when subjected to high temps. and oxidizing influences (air, oxygen). Thus, 200 g of a 36% solution of 75:25 methacrylic acid-polyethylene glycol Me ether methacrylate copolymer was mixed with 0.36 g Additin RC 7135 (styrenated diphenylamine) and spray dried to produce a powder with average particle diameter 28  $\mu\text{m}$ . This powder did not experience autoignition, whereas addition of the powdered additive to the unstabilized copolymer powder produced a product of similar particle size which did.

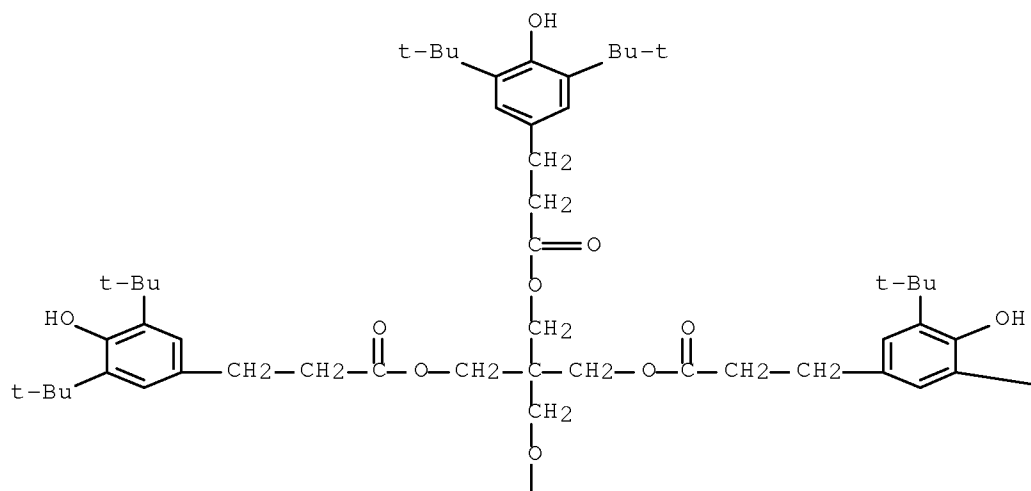
IT 6683-19-8

RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer; stabilized water-soluble powders of  
polyoxyalkylene glycol carboxylates)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

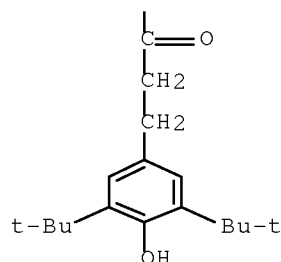
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



IC ICM C08K005-00  
ICS C04B024-32

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 58

ST stabilization water soluble copolymer powder

IT Heat stabilizers  
(stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT Concrete  
(stabilized water-soluble powders of polyoxyalkylene glycol carboxylates for use in)

IT 12738-63-5 111740-39-7, Methacrylic acid-polyethylene glycol methyl ether methacrylate graft copolymer 167763-01-1D, Ethylene oxide-methacrylic acid graft copolymer, Me ether 262364-23-8 262364-24-9D, Me ether 262364-25-0 262364-26-1D, Me ether  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 119-47-1, 2,2'-Methylenebis(6-tert-butyl-4-methylphenol)  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer, Additin RC 7115; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 96-69-5, 4,4'-Thiobis(2-tert-butyl-5-methylphenol)  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer, Lowinox 44S36; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 79-74-3, 2,5-Di-tert-amylhydroquinone  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer, Lowinox AH 25; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 92-84-2, Phenothiazine 128-37-0, Lowinox BHT, uses 693-36-7, Irganox PS 802 6683-19-8 36339-47-6, Hostanox OSP 1 52038-44-5, Vulkanox OCD 252858-71-2, Additin RC 7135  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

July 26, 2009

10/586,707

51

DOCUMENT NUMBER: 132:195251  
 TITLE: Manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers  
 INVENTOR(S): Toritani, Akihiro; Shishido, Koichi; Matsumura, Koji; Makino, Hideaki; Nakada, Akira; Sato, Haruki  
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000072882	A	20000307	JP 1998-243711	19980828

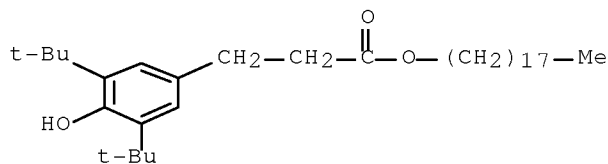
PRIORITY APPLN. INFO.: JP 1998-243711  
 19980828

AB Title powdered graft copolymers are manufactured by spray drying latexes containing 100 parts diene graft copolymers with rubber content 50-85%, 0.1-2 parts hindered phenol stabilizers, and 0.3-6 parts thio ether stabilizers for powdering. Thus, a mixture containing 1,3-butadiene-Et methacrylate-Me methacrylate-styrene graft copolymer, triethylene glycol bis[3-(3-tert-butyl-5-methyl-4-hydroxyphenyl) propionate], dilauryl 3,3'-thiodipropionate, and Aerosil R 972 (SiO<sub>2</sub>) was spray dried to give powders with sharp particle size distribution, which were mixed with a PVC mixture and molded to give a test piece showing Izod impact strength 90 kg-cm/cm<sup>2</sup>.

IT 2082-79-3 36443-68-2  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (antioxidants; manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

RN 2082-79-3 HCAPLUS

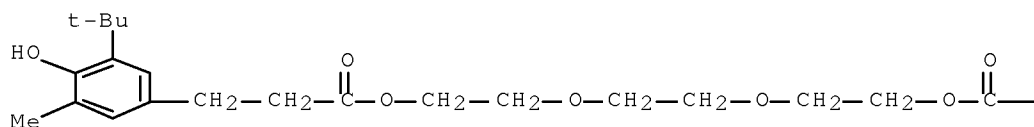
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



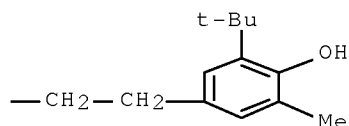
RN 36443-68-2 HCAPLUS

CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy-5-methyl-, 1,1'-[1,2-ethanediylbis(oxy-2,1-ethanediyl)] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM C08J003-12  
ICS C08J003-12; C08K005-13; C08K005-36; C08L051-04
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38
- ST diene graft polymer powder manuf spray drying;  
butadiene styrene rubber graft copolymer impact  
modifier; PVC impact resistance diene graft copolymer blend
- IT Phenols, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(hindered, antioxidants; manufacture of powdered diene graft  
copolymers for impact modifiers of vinyl  
chloride polymers by spray drying)
- IT Antioxidants  
Impact-resistant materials  
(manufacture of powdered diene graft copolymers for  
impact modifiers of vinyl chloride polymers  
by spray drying)
- IT Thioethers  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(manufacture of powdered diene graft copolymers for  
impact modifiers of vinyl chloride polymers  
by spray drying)
- IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use);  
USES (Uses)  
(manufacture of powdered diene graft copolymers for  
impact modifiers of vinyl chloride polymers  
by spray drying)
- IT Drying  
(spray; manufacture of powdered diene graft copolymers  
for impact modifiers of vinyl chloride polymers  
by spray drying)
- IT 123-28-4, Dilauryl 3,3'-thiodipropionate 2082-79-3  
7575-23-7D, Pentaerythritol tetrakis(3-mercaptopropionate), alkyl  
derivs. 36443-68-2  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(antioxidants; manufacture of powdered diene graft  
copolymers for impact modifiers of vinyl  
chloride polymers by spray drying)

IT 7631-86-9, Silica, uses 60842-32-2, Aerosil R 972  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (fillers; manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

IT 256520-50-0P, 1,3-Butadiene-ethyl methacrylate-methyl methacrylate-styrene graft copolymer  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process); USES (Uses)  
 (manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

IT 9002-86-2, Poly(vinyl chloride)  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

L39 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:691156 HCAPLUS Full-text

DOCUMENT NUMBER: 131:311219

TITLE: Granulate compositions containing antiblocking agents as additives having good dispersibility and no dust for polymer films

INVENTOR(S): Tonnvik, Mats; Sturm, Andreas; Van Essche, Gonda; Schmidt, Andreas

PATENT ASSIGNEE(S): Grace GmbH, Germany

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
WO 9954396	A1	19991028	WO 1999-EP2559	19990416
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19817257	A1	19991209	DE 1998-19817257	19980419
CA 2329227	A1	19991028	CA 1999-2329227	19990416
AU 9938173	A	19991108	AU 1999-38173	199904

				16
AU 760539	B2	20030515		
BR 9909708	A	20001226	BR 1999-9708	
				199904
				16
EP 1073692	A1	20010207	EP 1999-920682	
				199904
				16
EP 1073692	B1	20051026		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				
PT, IE, FI				
JP 2002512287	T	20020423	JP 2000-544734	
				199904
				16
AT 307852	T	20051115	AT 1999-920682	
				199904
				16
ES 2252943	T3	20060516	ES 1999-920682	
				199904
				16
TW 483913	B	20020421	TW 1999-88106008	
				199906
				08
ZA 2000005576	A	20010515	ZA 2000-5576	
				200010
				11
IN 195318	A1	20050204	IN 2000-MN508	
				200010
				16
MX 2000010147	A	20020108	MX 2000-10147	
				200010
				17
US 6569933	B1	20030527	US 2000-673875	
				200012
				11
PRIORITY APPLN. INFO.:			DE 1998-19817257	A
				199804
				19
			WO 1999-EP2559	W
				199904
				16

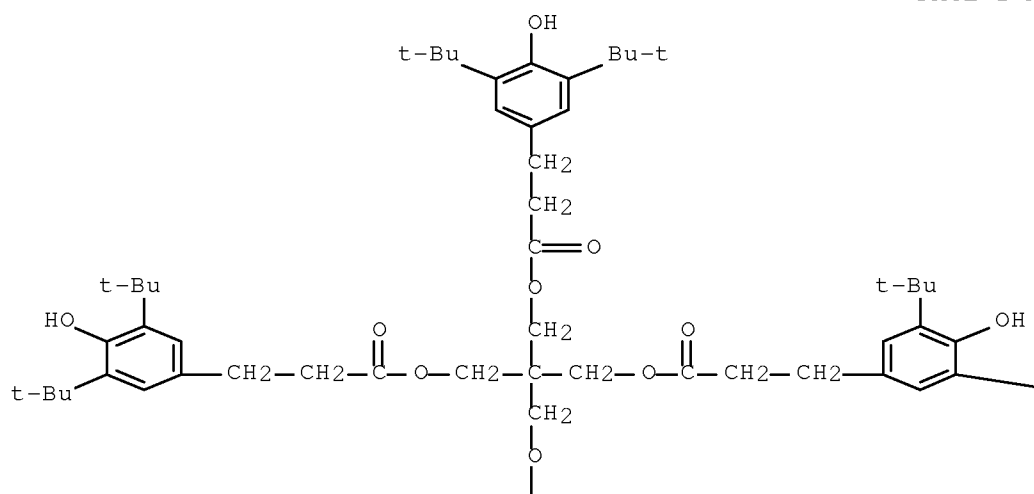
AB The granulate composition consists of (a) 5-60% micronized silicic acid gel having average particle size 2-15  $\mu$ , specific pore volume 0.3-2.0 mL/g, and sp. surface (BET) 200-1000 m<sup>2</sup>/g, or (b) 5-75% dehydrated aluminosilicate with particle size 1-25  $\mu$  containing sodium, potassium and/or calcium cations, and (c) 25-95% organic additive composition containing a lubricant, an antioxidant, an antistatic agent, a light stabilizer, a flame retardant, and/or a softener.

IT ~~6683-19-8~~, Irganox 1010  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (granulate compns. containing antiblocking agents as additives having good dispersibility for polymer films)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

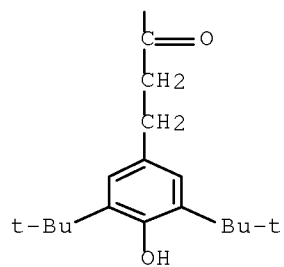
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



IC ICM C08K009-04  
ICS C08J003-22

CC 37-2 (Plastics Manufacture and Processing)  
 ST antiblocking agent ~~additive granulate~~  
 polymer film; silicic acid aluminosilicate additive  
 granulate  
 IT 1592-23-0, Calcium stearate 6683-19-8, Irganox 1010  
 31570-04-4  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
 chemical process); PROC (Process); USES (Uses)  
 (granulate compns. containing antiblocking agents as  
 additives having good dispersibility for polymer films)  
 OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS  
 RECORD (5 CITINGS)  
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L39 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1997:425195 HCAPLUS Full-text  
 DOCUMENT NUMBER: 127:36041  
 ORIGINAL REFERENCE NO.: 127:6919a,6922a  
 TITLE: Acid-epoxy curing type ~~powder~~ coating  
 for a coated film having excellent yellow  
 resistance and appearance  
 INVENTOR(S): Nakae, Yasuhiko; Nakatsuka, Hitoshi; Inoue,  
 Koichi  
 PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 773268	A2	19970514	EP 1996-308066	199611 06
EP 773268 R: DE, GB	A3	19980429		
JP 09188833	A	19970722	JP 1996-296272	199611 08
US 5719212	A	19980217	US 1996-740349	199611 08
PRIORITY APPLN. INFO.:			JP 1995-291078	A 199511 09

OTHER SOURCE(S): MARPAT 127:36041  
 AB The ~~powder~~ coating composition comprises (A) an epoxy group-containing acrylic  
 resin prepared by polymerizing the monomer ~~mixture~~ (a) 35-65% epoxy group-  
 containing ethylenically unsatd. monomer, and (b) remainder amount of an  
 ethylenically unsatd. monomer which is different from the epoxy group-  
 containing ethylenically unsatd. monomer; (B) a polycarboxylic acid; and (C)  
 an antioxidant (m.p. 50-140°), optionally a surface modifier. A ~~powder~~  
 composition containing glycidyl methacrylate-iso-Bu methacrylate-Me  
 methacrylate-styrene ~~copolymer~~ (glass transition temperature 52°) 100,



decanedicarboxylic acid 27.3, 2,6-ditert-butyl-4-methylphenol 1.27, tris(4-tert-butylphenyl)phosphite 2.54, surface modifier 0.76 parts, and silica, and other coating flow additives was applied onto a white panel and baked at 150° for 25 min to give a coated panel having good appearance.

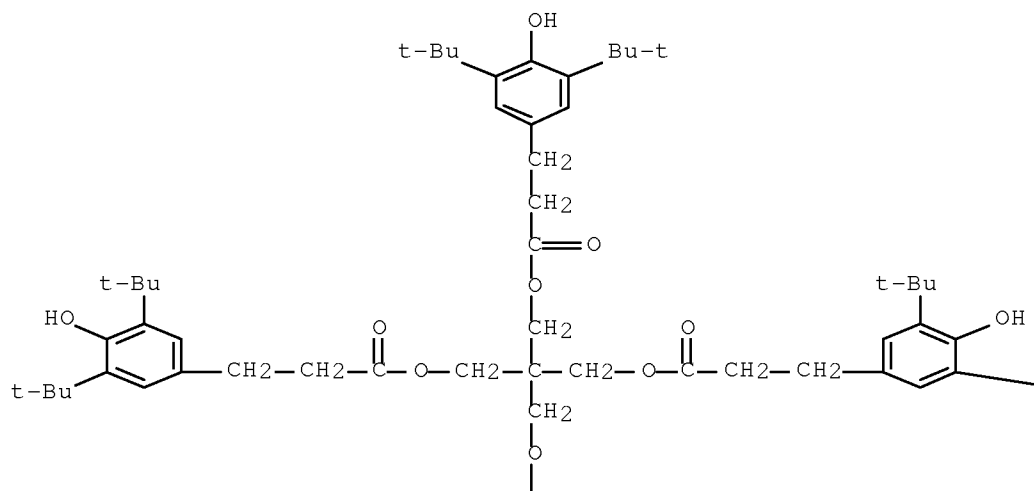
IT 6683-19-8

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(acid-epoxy curing type ~~powder~~ coating for a coated  
film having excellent yellow resistance and appearance)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

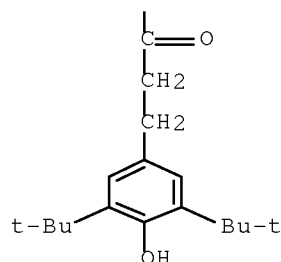
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



- IC ICM C09D133-14  
ICS C09D005-03; B05D007-26
- CC 42-10 (Coatings, Inks, and Related Products)
- ST acrylic epoxy powder coating; phenol antioxidant acrylic epoxy powder coating; phosphite antioxidant acrylic epoxy powder coating; acid cured epoxy powder coating; surface modifier polyacrylate powder coating
- IT Antioxidants  
(acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT Coating materials  
(powder; acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 54942-97-1P, Butyl methacrylate-glycidyl methacrylate-isobutyl methacrylatemethyl methacrylate-styrene copolymer  
55567-80-1P, Butyl methacrylate-glycidyl methacrylatemethyl methacrylate-styrene copolymer 63266-53-5P, Glycidyl methacrylate-isobutyl methacrylatemethyl methacrylate-styrene copolymer 190957-35-8P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 128-37-0, uses 2082-79-3, n-Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate 2752-19-4, Tris(2-phenylphenyl)phosphite 4235-89-6 ~~6683-19-8~~ 13468-92-3, Tris(2-tert-butyl-5-methylphenyl)phosphite 21177-86-6, Tris(2-tert-butyl-4-methylphenyl)phosphite 25963-45-5 73754-27-5 90498-90-1  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 26634-89-9, Butyl methacrylate-methyl methacrylate-styrene copolymer  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(blocking inhibitor; acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 62300-19-0P 71206-55-8P, Decanedicarboxylic acid-glycidyl methacrylate-isobutyl methacrylatemethyl methacrylate-styrene copolymer 190957-37-0P 190957-39-2P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked powder clear coating with good appearance)

IT 26353-42-4, Butyl acrylate-ethyl acrylate ~~copolymer~~  
RL: PRP (Properties); TEM (Technical or engineered material use);  
USES (Uses)  
(surface ~~modifier~~; acid-epoxy curing type  
powder coating for a coated film having excellent yellow  
resistance and appearance)  
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS  
RECORD (8 CITINGS)

L39 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1995:967248 HCAPLUS Full-text  
DOCUMENT NUMBER: 123:342304  
ORIGINAL REFERENCE NO.: 123:61435a,61438a  
TITLE: ~~Mixing~~ additives with  
polyester-polyethers  
INVENTOR(S): Ukielski, Ryszard  
PATENT ASSIGNEE(S): Politechnika Szczecinska, Pol.  
SOURCE: Pol., 3 pp.  
CODEN: POXXA7  
DOCUMENT TYPE: Patent  
LANGUAGE: Polish  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
PL 161541	B1	19930730	PL 1989-282902	198912 19
PRIORITY APPLN. INFO.:			PL 1989-282902	198912 19

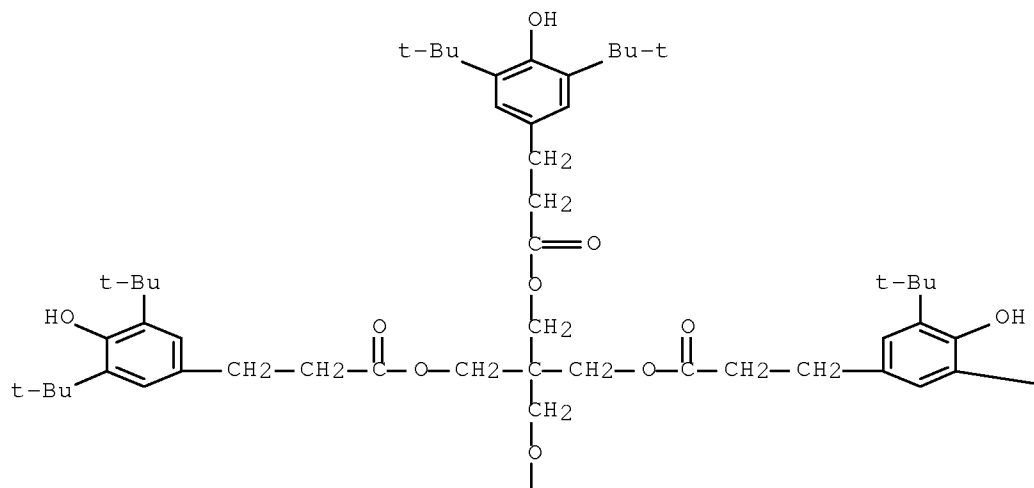
AB The distribution of additives such as fillers, reinforcing agents,  
fireproofing agents, pigments, and dyes is improved in polyester-polyethers  
such as block polyoxytetramethylene terephthalate-butylene terephthalate  
~~copolymer~~ containing 1-70% polyether blocks by 1st ~~mixing granules~~ of these  
polymers with 0.1-25% polyethers and(or) aliphatic polyesters with mol. weight  
200-6000 and optionally 0.1-20% additives for manufacture of fibers.

IT ~~6683-19-8~~, Irganox 1010  
RL: MOA (Modifier or additive use); USES (Uses)  
(~~mixing additives~~ with polyester-polyethers)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

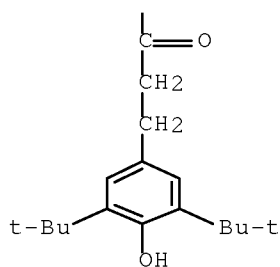
PAGE 1-A



PAGE 1-B

Chemical structure diagram for PAGE 1-B. The structure shows a 2,4,6-tri-tert-butylphenyl group.

PAGE 2-A



IC ICM C08J003-20  
 ICS C08K009-04; C08L067-02  
 CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 40

- ST ~~mixing~~ additive polyoxytetramethylene polyester; dye  
~~mixing~~ polyoxytetramethylene polyester; pigment  
~~mixing~~ polyoxytetramethylene polyester; fireproofing agent  
~~mixing~~ polyoxytetramethylene polyester; reinforcing agent  
~~mixing~~ polyoxytetramethylene polyester; filler  
~~mixing~~ polyoxytetramethylene polyester; butylene  
polyterephthalate ~~mixing~~ additive; aliph polyester  
dispersant additive polyoxytetramethylene polyester; polyether  
dispersant additive polyoxytetramethylene polyester
- IT Polyethers, uses  
Polyoxyalkylenes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersants; ~~mixing~~ additives with  
polyester-polyethers)
- IT Dyes  
Fireproofing agents  
Pigments  
(~~mixing~~ additives with polyester-polyethers)
- IT Glass fibers, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(~~mixing~~ additives with polyester-polyethers)
- IT Dispersing agents  
(polyethers and aliphatic polyesters; ~~mixing~~ additives  
with polyester-polyethers)
- IT Polyesters, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(aliphatic, dispersants; ~~mixing~~ additives with  
polyester-polyethers)
- IT Paraffin waxes and Hydrocarbon waxes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(chloro, ~~mixing~~ additives with polyester-polyethers)
- IT Polyoxyalkylenes, uses  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(polyester-, block, ~~mixing~~ additives with  
polyester-polyethers)
- IT Polyesters, uses  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(polyoxyalkylene-, block, ~~mixing~~ additives with  
polyester-polyethers)
- IT 25322-69-4, Polypropylene glycol  
RL: MOA (Modifier or additive use); USES (Uses)  
(Rokopol D-7P, dispersant; ~~mixing~~ additives with  
polyester-polyethers)
- IT 25190-06-1, Polytetramethylene glycol  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersant; ~~mixing~~ additives with  
polyester-polyethers)
- IT 1309-64-4, Antimony trioxide, uses 6683-19-8, Irganox  
1010  
RL: MOA (Modifier or additive use); USES (Uses)  
(~~mixing~~ additives with polyester-polyethers)
- IT 106159-00-6, 1,4-Butanediol-polytetramethylene glycol-terephthalic  
acid block copolymer  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(~~mixing~~ additives with polyester-polyethers)

July 26, 2009

10/586,707

62

L39 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:958206 HCAPLUS Full-text

DOCUMENT NUMBER: 123:342245

ORIGINAL REFERENCE NO.: 123:61427a,61430a

TITLE: Manufacture of colored or additive-containing granules from thermoplastic polymers

INVENTOR(S): Aslan, Vintila; Nerva, Traian Mihai; Aslan, Romanita Stela; Parlog, Mihai

PATENT ASSIGNEE(S): Centrala Industriala Mase Plastice, Bucuresti, Rom.

SOURCE: Rom., 4 pp.  
CODEN: RUXXA3

DOCUMENT TYPE: Patent

LANGUAGE: Romanian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
RO 104194	B1	19940720	RO 1989-138770	198903 20
			PRIORITY APPLN. INFO.: RO 1989-138770	198903 20

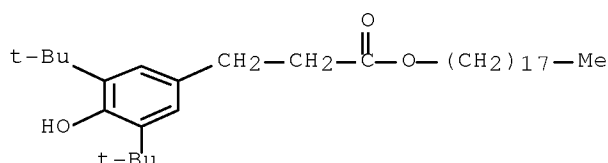
AB Title granules with high strength for molding are manufactured by mixing 95-99.5 parts semicryst. thermoplastic polymers with 0.01-5 parts polymers having m.p.  $\geq 10^\circ$  lower than the 1st polymers or 0.01-10 parts concs. containing additives or pigments dispersed in polymers having m.p. 9-150° so that the lower-melting polymers or the concs. are melted and deposited on the surface of the 1st polymers maintained in the solid state and cooling. Thus, granules of isotactic polypropylene m.p. 160-170° are mixed 5-10 min at 110° with 0.5 parts concentrate containing 30% Cu phthalocyanine blue and 70% polyethylene with mol. weight 1000 and m.p. 95° and the mixture is cooled while stirring.

IT 2082-79-3, Irganox 1076

RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



IC ICM C08J003-12

ICS C08J003-20

CC 37-6 (Plastics Manufacture and Processing)

ST thermoplastic polymer granule colored;

polyethylene granule copper phthalocyanine blue pigmented; isotactic  
polypropylene granule phthalocyanine blue pigmented;  
additive contg thermoplastic polymer  
granule

- IT Mixing  
Pigments  
(manufacture of colored or additive-containing granules from  
thermoplastic polymers for molding)
- IT Carbon black, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture of colored or additive-containing granules from  
thermoplastic polymers for molding)
- IT Polycarbonates, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(manufacture of colored or additive-containing granules from  
thermoplastic polymers for molding)
- IT Polymers, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(manufacture of colored or additive-containing granules from  
thermoplastic polymers for molding)
- IT 147-14-8, Copper phthalocyanine blue 2082-79-3, Irganox  
1076 7429-90-5, Aluminum, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture of colored or additive-containing granules  
from thermoplastic polymers for molding)
- IT 9002-88-4, Polyethylene 9002-88-4D, Polyethylene, oxidized  
25038-54-4, Nylon 6, uses 25085-53-4, Isotactic polypropylene  
RL: POF (Polymer in formulation); USES (Uses)  
(manufacture of colored or additive-containing granules from  
thermoplastic polymers for molding)

L39 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1994:410901 HCAPLUS Full-text  
DOCUMENT NUMBER: 121:10901  
ORIGINAL REFERENCE NO.: 121:2253a,2256a  
TITLE: Process for obtaining granular forms  
of additives for organic  
polymers  
INVENTOR(S): Neri, Carlo; Pallini, Luciano  
PATENT ASSIGNEE(S): Enichem Synthesis S.p.A., Italy  
SOURCE: Eur. Pat. Appl., 7 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 565184	A1	19931013	EP 1993-200971	199304 01
EP 565184	B1	19980617		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
AT 167500	T	19980715	AT 1993-200971	199304 01
ES 2117090	T3	19980801	ES 1993-200971	

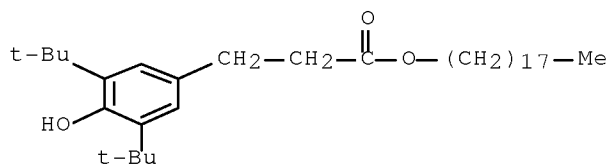
				199304 01
CA 2093380	A1	19931007	CA 1993-2093380	
				199304 05
CA 2093380	C	20030930		
AU 9336746	A	19931014	AU 1993-36746	
				199304 05
AU 653680	B2	19941006		
JP 06091152	A	19940405	JP 1993-103536	
				199304 06
JP 4125384	B2	20080730		
KR 9700145	B1	19970104	KR 1993-5669	
				199304 06
PRIORITY APPLN. INFO.:		IT 1992-MI827	A	199204 06

AB The process, useful for preparation of antioxidants, (in)organic antiacids, and/or light stabilizers for polymers, is carried out by extruding  $\geq 2$  additives at between the temperature of the lowest m.p. of the additive and 140°. Extruding a mixture of 134 g Anox PP 18 [octadecyl-3(3',5'-di-tert-4'-hydroxyphenyl)propionate] and 66 g Ca stearate at 49-50° gave pellets without powders.

IT 2082-79-3, Irganox 1076 6683-19-8, Anox 20  
RL: USES (Uses)  
(additives containing, granulars, preparation of, for polymers)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)

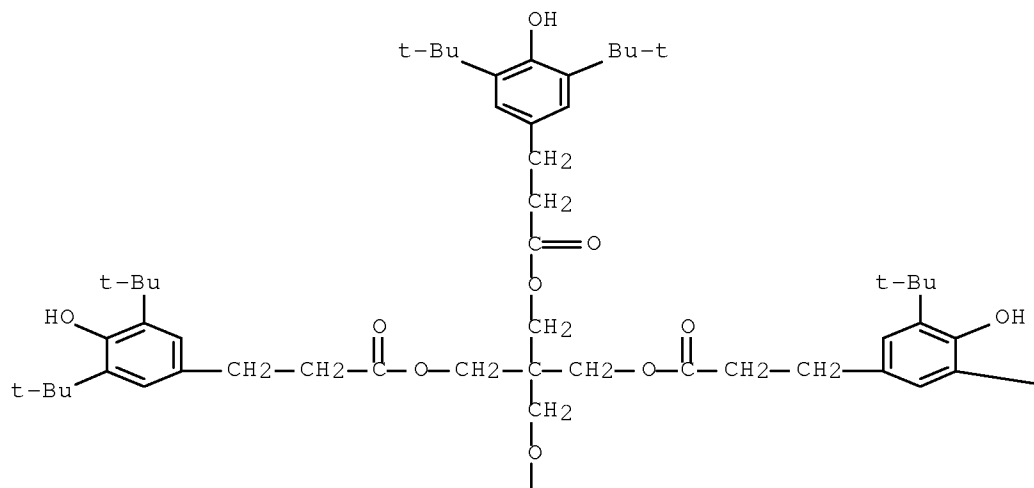


RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)



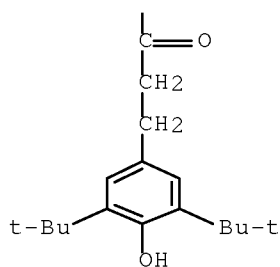
PAGE 1-A



PAGE 1-B

Bu-t

PAGE 2-A



IC ICM C08J003-22  
 ICS C08K005-00  
 CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

IT Antioxidants

Light stabilizers

(additives containing, granulars, preparation of, for polymers)

IT Extrusion

(of additive granulars, for polymers)

IT 25085-53-4, Moplen FLF 20

RL: USES (Uses)

(additive granulars for, preparation of)

IT 557-05-1, Zinc stearate 1592-23-0, Calcium stearate 1843-05-6,

Chimassorb 81 2082-79-3, Irganox 1076 3896-11-5,

Tinuvin 326 6683-19-8, Anox 20 12304-65-3,

Hydrotalcite 31570-04-4, Alkanox 240 52829-07-9, Tinuvin 770

70198-29-7, Tinuvin 622

RL: USES (Uses)

(additives containing, granulars, preparation of, for polymers)

OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L39 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1993:672558 HCAPLUS Full-text

DOCUMENT NUMBER: 119:272558

ORIGINAL REFERENCE NO.: 119:48789a, 48792a

TITLE: Method for the preparation of polymer

additive compositions as dry,

water-dispersible, free-flowing powders

INVENTOR(S):

Hitch, Brenda Jo; Sharma, Mahendra Kumar;

Voegtli, Leo Paul

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
WO 9307209	A1	19930415	WO 1992-US8118	199209 24
W: AU, BR, CA, HU, JP, KR, RU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
US 5358560	A	19941025	US 1991-771908	199110 04
AU 9226719	A	19930503	AU 1992-26719	199209 24
AU 666131	B2	19960201		
EP 606344	A1	19940720	EP 1992-920825	199209 24
EP 606344	B1	19960103		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				

July 26, 2009

10/586,707

67

HU 68519	A2	19950628	HU 1994-951	199209 24
JP 07506598	T	19950720	JP 1992-506952	199209 24
BR 9206592	A	19951010	BR 1992-6592	199209 24
AT 132518	T	19960115	AT 1992-920825	199209 24
ES 2081630	T3	19960301	ES 1992-920825	199209 24
CA 2120018	C	19971223	CA 1992-2120018	199209 24
CN 1072695	A	19930602	CN 1992-112075	199210 03
PRIORITY APPLN. INFO.:			US 1991-771908	A 199110 04
			WO 1992-US8118	A 199209 24

AB The title compns., forming aqueous dispersions for application to ~~polymer~~ particles, contain 5-99% additive (antioxidant, heat stabilizer, colorant, etc.), ≤95% tackifier which is nontacky at ≤50°, and 0.2-20% surfactant having HLB value ≥4. A ~~powder~~ was prepared by milling a ~~mixt.~~ of Irganox 1010 9.98, Epolene E-14 (emulsifiable polyethylene wax as tackifier) 1.49, Arlacel 80 0.097, and Igepal CO-130 0.049 g.

IT ~~6683-19-8~~, Irganox 1010

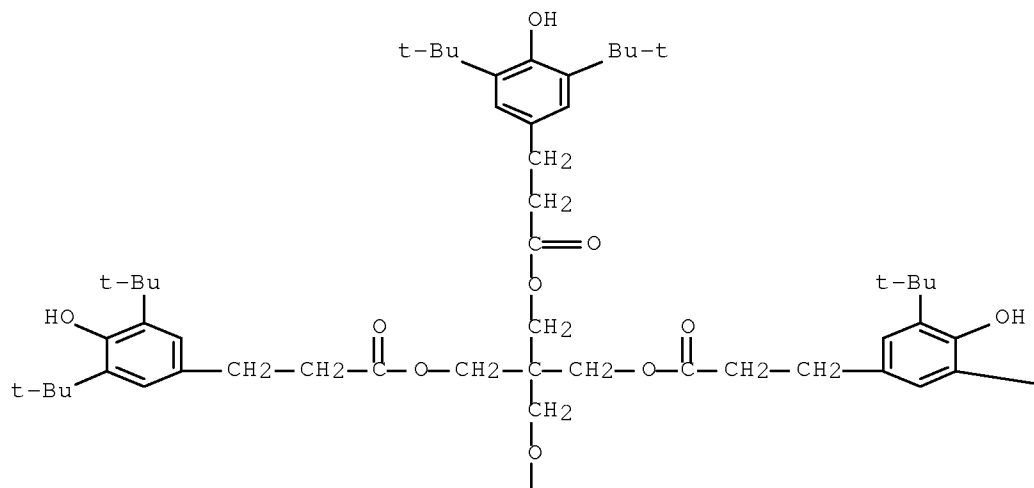
RL: USES (Uses)

(antioxidant, ~~powder~~ containing, for dispersion in water and addition to ~~polymer~~ particles)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

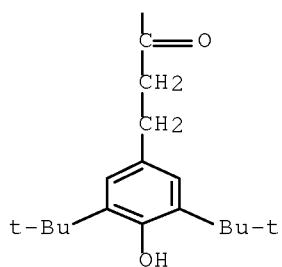
PAGE 1-A



PAGE 1-B

Bu-t

PAGE 2-A



IC ICM C08K009-00  
 ICS C08J003-20  
 CC 37-6 (Plastics Manufacture and Processing)

ST antioxidant powder dispersion addn polymer;  
powder polymer additive dispersant  
mixt; tackifier polymer additive  
mixt powder

IT Polymers, miscellaneous  
RL: MSC (Miscellaneous)  
(particles, aqueous dispersions of additive-containing powders  
for addition to)

IT Surfactants  
Tackifiers  
(powder containing polymer additive  
and, water-dispersible)

IT Antioxidants  
Lubricants  
(powder containing, for dispersion in water and addition to  
polymer particles)

IT Dispersing agents  
(powders containing polymer additives  
and, for addition to polymer particles)

IT Powders  
(free-flowing, polymer additive-containing, for  
dispersion in water and addition to polymer particles)

IT 123-28-4, Dilauryl thiodipropionate 693-36-7, Distearyl  
thiodipropionate 1709-70-2, Ethanox 330 2082-79-3, Irganox 1076  
6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
89421-57-8, Irganox B 225 122965-04-2, Irganox B 501W  
RL: USES (Uses)  
(antioxidant, powder containing, for dispersion in water  
and addition to polymer particles)

IT 1592-23-0, Calcium stearate  
RL: USES (Uses)  
(lubricant, powder containing, for dispersion in water and  
addition to polymer particles)

IT 11097-59-9, DHT 4A  
RL: USES (Uses)  
(powder containing, for dispersion in water and addition to  
polymer particles)

IT 1338-43-8, Arlacel 80 9005-65-6, Tween 80 9016-45-9, Igepal CO  
210  
RL: USES (Uses)  
(surfactant, powder containing polymer  
additive and, water-dispersible)

IT 12634-23-0, Epolene E 14  
RL: USES (Uses)  
(tackifier, powder containing polymer  
additive and, water-dispersible)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS  
RECORD (3 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1993:518619 HCAPLUS Full-text  
DOCUMENT NUMBER: 119:118619  
ORIGINAL REFERENCE NO.: 119:21353a,21356a  
TITLE: Process for granulating  
powdery additives for organic  
polymers  
INVENTOR(S): Neri, Carlo; Pallini, Luciano

July 26, 2009

10/586,707

70

PATENT ASSIGNEE(S): Enichem Synthesis S.p.A., Italy; Great Lakes  
Chemical (Europe) GmbH  
SOURCE: Eur. Pat. Appl., 9 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 514784	A1	19921125	EP 1992-108230	199205 15
EP 514784	B1	20010816		
EP 514784	B2	20051005		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
US 5240642	A	19930831	US 1992-883213	199205 14
CA 2068840	A1	19921118	CA 1992-2068840	199205 15
AT 204314	T	20010915	AT 1992-108230	199205 15
JP 05179056	A	19930720	JP 1992-124589	199205 18
US 5844042	A	19981201	US 1997-937899	199709 25
PRIORITY APPLN. INFO.:			IT 1991-MI1354	A 199105 17
			US 1993-43349	B1 199304 06

AB Homogeneous granulated (in)organic additives for neutralization of acid (catalyst) residues in organic polymers, especially polyolefins, are obtained by granulating conventional powdery material, e.g., a metal stearate, carbonate, etc., in the presence of  $\geq 1\%$  antioxidant tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane (I) in the molten state. Granulated additives do not develop harmful dust in the air, they do not agglomerate inside the feed hoppers, and their performance is comparable to powdery materials. Thus, a homogenized 1:1 mixture of Anox 20 (a crystalline com. I) and Ca stearate powders was extruded at 115° to give a strand which was cut to .apprx.2.5-mm granules. Extruded and re-extruded samples of a com. polypropylene containing 0.2% of the above granules had yellowing index -2.6, -1.3, and 0.3, and melt flow index 20.6, 28.8, and 36.0 after 1st, 3d, and 5th extrusion, vs. -2.5, -0.8, and 0.7, and 20.7, 29.0, and 36.0 for the same polymer blended with the same amts. of powdery stabilizers.

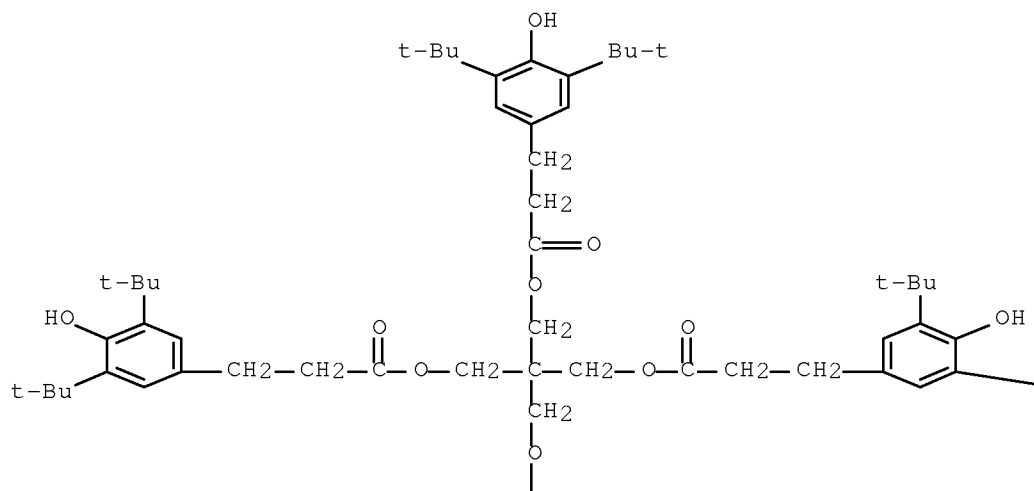
IT 6683-19-8P, Anox 20AM  
RL: PREP (Preparation)  
(stabilizers for polymers containing acid neutralization

additives and, granulated, manufacture of)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

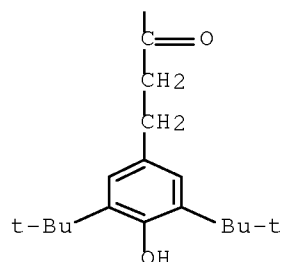
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



IC ICM C08K005-13  
ICS C08J003-22

CC 37-6 (Plastics Manufacture and Processing)

ST polymer acid stabilizer granulation antioxidant;  
granulation melt antioxidant calcium stearate; melt  
antioxidant blending acid stabilizer; polypropylene stabilization  
antioxidant stearate granulate

IT Polymers, miscellaneous  
RL: MSC (Miscellaneous)  
(acid neutralization additive and antioxidant  
blends for, manufacture of granulated)

IT Stabilizing agents  
(for polymers, granulated antioxidant and  
acid neutralization additive blends as)

IT Oxides, uses  
RL: USES (Uses)  
(stabilizers for polymers containing antioxidants and,  
granulated, manufacture of)

IT Alkenes, polymers  
RL: USES (Uses)  
(polymers, acid neutralization additive and  
antioxidant blends for, manufacture of granulated)

IT 25085-53-4, Moplen FLF20  
RL: USES (Uses)  
(acid neutralization additive and antioxidant blends  
for, manufacture of granulated)

IT 6683-19-8P, Anox 20AM  
RL: PREP (Preparation)  
(stabilizers for polymers containing acid neutralization  
additives and, granulated, manufacture of)

IT 57-11-4DP, Stearic acid, metal salts 463-79-6DP, Carbonic acid,  
metal salts 557-05-1P, Zinc stearate 1314-13-2P, Zinc oxide,  
miscellaneous 1592-23-0P, Calcium stearate 12304-65-3P,  
Hydrotalcite  
RL: PREP (Preparation)  
(stabilizers for polymers containing antioxidants and,  
granulated, manufacture of)

OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS  
RECORD (27 CITINGS)

L39 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1992:60892 HCAPLUS Full-text  
DOCUMENT NUMBER: 116:60892  
ORIGINAL REFERENCE NO.: 116:10527a,10530a  
TITLE: Solid-form additive systems dispersible in  
aqueous media for addition to polymers



July 26, 2009

10/586,707

73

INVENTOR(S): Sharma, Mahendra Kumar  
 PATENT ASSIGNEE(S): Eastman Kodak Co., USA  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
WO 9116372	A1	19911031	WO 1991-US2292	199104 09
W: AU, BR, CA, HU, JP, KR, SU RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
US 5153029	A	19921006	US 1990-513389	199004 23
CA 2080836	A1	19911024	CA 1991-2080836	199104 09
CA 2080836	C	19970805		
AU 9177536	A	19911111	AU 1991-77536	199104 09
AU 651110	B2	19940714		
EP 526546	A1	19930210	EP 1991-908731	199104 09
EP 526546	B1	19960717		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
BR 9106370	A	19930427	BR 1991-6370	199104 09
HU 62317	A2	19930428	HU 1992-3199	199104 09
JP 05507103	T	19931014	JP 1991-508313	199104 09
AT 140467	T	19960815	AT 1991-908731	199104 09
ES 2090329	T3	19961016	ES 1991-908731	199104 09
CN 1055936	A	19911106	CN 1991-102570	199104 23
US 5300256	A	19940405	US 1992-956532	199210 05
US 6107383	A	20000822	US 1994-199863	199402 22
PRIORITY APPLN. INFO.:			US 1990-513389	A
				199004 23

US 1989-392759	A2	198908 11
WO 1991-US2292	A	199104 09
US 1992-956532	A3	199210 05

AB The title systems are prepared by heating an additive (e.g., antioxidant) to form a melt phase, ~~mixing~~ the melt with surfactants having low and high HLB values, ~~mixing~~ with water to form a water-in-oil emulsion, and cooling to give a water-dispersible encapsulated solid material (particle size 5-1000  $\mu$ m). A melt comprising Irganox 1076 50.0, Epolene E-14 (polyethylene) 10.0, and Ca stearate 15.9 g was prepared at 60-70°, ~~mixed~~ with 1.4 g Igepal CO-210 and 1.9 g Igepal CO-630, treated slowly with 15.0 g water, and cooled to give a dispersion of fine particles in water. The dispersion was resistant to phase separation for several weeks and was suitable for addition to ~~polymer~~ (e.g., polypropylene) particles to impart heat stability.

IT 6683-19-8

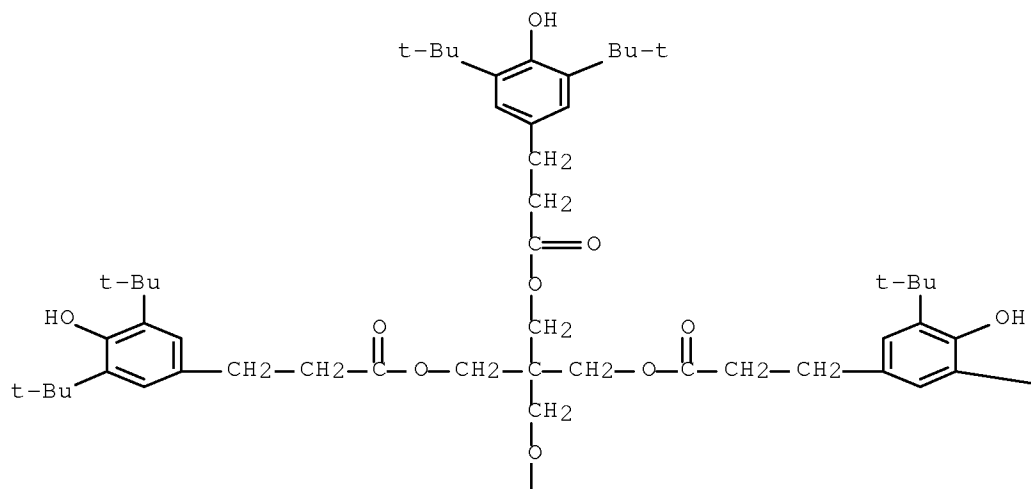
RL: USES (Uses)

(antioxidants, dispersions of, for addition to ~~polymers~~)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

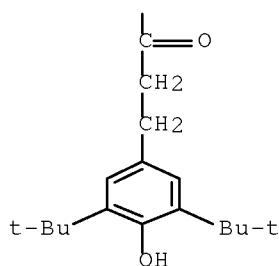
PAGE 1-A



PAGE 1-B

—Bu-t

PAGE 2-A



- IC ICM C08J003-20  
ICS C08J003-22; C08K009-04; C08K005-00
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 46
- ST antioxidant dispersion addn polymer; emulsion  
additive addn polymer; dispersion additive  
addn polymer; polypropene antioxidant addn dispersion
- IT Quaternary ammonium compounds, uses  
RL: USES (Uses)  
(antistatic agents, dispersions of, for addition to polymers  
)
- IT Emulsifying agents  
(powdered polymer additives containing,  
for mixing with polymers)
- IT Antistatic agents  
Fireproofing agents  
Kieselguhr  
RL: USES (Uses)  
(powdered, dispersions of, for addition to polymers  
)
- IT Clays, uses  
RL: USES (Uses)  
(processing aids, dispersions of, for addition to polymers  
)
- IT Antioxidants  
(water-dispersible powders containing, for addition to

polymers)  
IT Light stabilizers  
(UV, powdered, dispersions of, for addition to  
polymers)  
IT 9003-07-0, Polypropylene  
RL: USES (Uses)  
(additives for, water-dispersible powders containing)  
IT 85-60-9 693-36-7, Distearyl thiodipropionate 1709-70-2  
2082-79-3 3287-12-5, Dicityl thiodipropionate 3806-34-6  
6683-19-8 16545-54-3, Dimyristyl thiodipropionate  
26523-78-4, Tris(monononylphenyl) phosphite 26741-53-7  
27676-62-6 63123-11-5 86624-80-8 125559-66-2  
RL: USES (Uses)  
(antioxidants, dispersions of, for addition to polymers)  
IT 128-37-0, miscellaneous  
RL: MSC (Miscellaneous)  
(antioxidants, dispersions of, for addition to polymers)  
IT 138533-21-8 138533-22-9 138551-43-6  
RL: USES (Uses)  
(colorants, dispersions of, for addition to polymers)  
IT 1338-43-8, Arlacel 80 9016-45-9, Igepal CO-630  
RL: USES (Uses)  
(emulsifiers, for antioxidants, for addition to polymers)  
IT 14807-96-6, Talc, uses  
RL: USES (Uses)  
(fillers, dispersions of, for addition to polymers)  
IT 1163-19-5, Decabromodiphenyl oxide 1309-64-4, Antimony trioxide,  
uses 13560-89-9 32588-76-4 52907-07-0  
RL: USES (Uses)  
(fireproofing agents, dispersions of, for addition to  
polymers)  
IT 87-18-3, p-tert-Butylphenyl salicylate 1843-05-6,  
2-Hydroxy-4-octoxybenzophenone 2985-59-3 3896-11-5 4221-80-1  
25973-55-1 30947-30-9 33059-05-1 52829-07-9  
RL: USES (Uses)  
(light stabilizers, dispersions of, for addition to polymers  
)  
IT 112-84-5, Erucamide 301-02-0, Oleamide 25322-68-3, Polyethylene  
glycol 31566-31-1, Glycerol monostearate  
RL: USES (Uses)  
(processing aids, dispersions of, for addition to polymers  
)  
IT 6629-10-3 70331-94-1  
RL: USES (Uses)  
(stabilizers, dispersions of, for addition to polymers)  
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
RECORD (2 CITINGS)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1984:425101 HCAPLUS Full-text

DOCUMENT NUMBER: 101:25101

ORIGINAL REFERENCE NO.: 101:3975a,3978a

TITLE: Powdered olefin polymer  
coating materials

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

July 26, 2009

10/586,707

77

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 59020362	A	19840202	JP 1982-129552	198207 27
PRIORITY APPLN. INFO.:				JP 1982-129552 198207 27

AB Powdered compns. containing an ethylene- $\alpha$ -olefin copolymer having d. 0.91-0.935, bulk 0.25-0.55 g/mL, and average particle size 70-250  $\mu$ , dibenzylidenesorbitol (I) [32647-67-9] or its derivative, and an antioxidant are useful as coatings with good luster, bond strength, and surface smoothness. Thus, 1-butene-ethylene copolymer [25087-34-7] 100, I 0.4, and pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate) [6683-19-8] 0.4 parts were mixed and pulverized. Luster, bond strength, and surface smoothness were good in coating stainless steel plate with the mixed powdered composition and heating the plate for 4 min at 350° and 3 min at 200°.

IT 6683-19-8

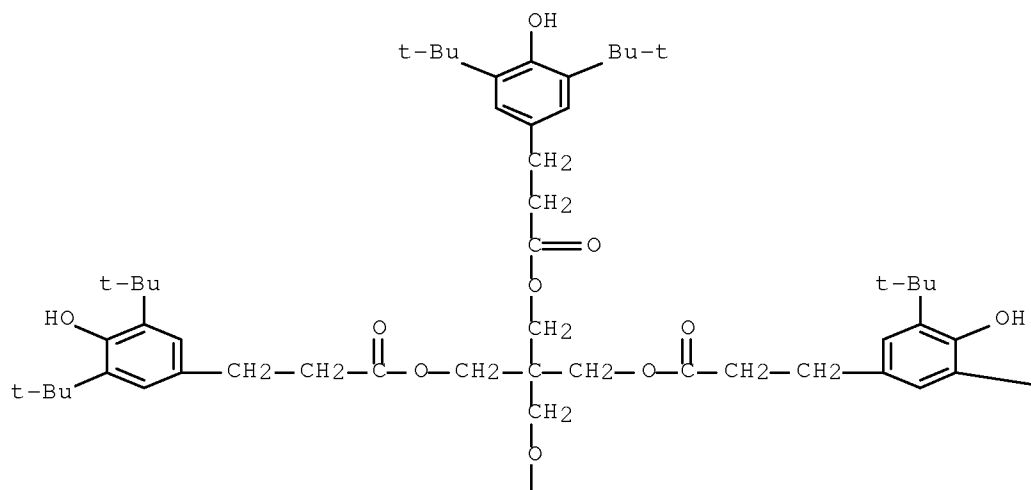
RL: USES (Uses)

(antioxidants, olefin powder coatings containing, for improved surface strength and luster)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

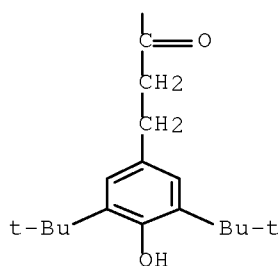
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



IC C09D005-00; C08K005-05; C08L023-08; C09D003-733; C09D005-40  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST olefin polymer powder coating;  
 dibenzylidenesorbitol additive olefin polymer;  
 pentaerythritol tetrakisdi-tert-butylhydrocinnamate antioxidant;  
 antioxidant olefin polymer coating; butene ethylene  
 copolymer coating; luster olefin polymer coating;  
 surface strength olefin polymer coating  
 IT Coating materials  
 (powder, ethylene-butene copolymers containing  
 dibenzylidenesorbitol and phenolic antioxidant as, with improved  
 luster and surface strength)  
 IT 6683-19-8  
 RL: USES (Uses)  
 (antioxidants, olefin powder coatings containing, for  
 improved surface strength and luster)  
 IT 25087-34-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings, containing dibenzylidenesorbitol and phenolic  
 antioxidants, powdered)  
 IT 32647-67-9  
 RL: USES (Uses)  
 (olefin powder coatings containing, for improved luster)  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
 RECORD (1 CITINGS)

July 26, 2009

10/586,707

79

=>